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EASTER HOLIDAYS.

NEXT week THE CHEMIST AND DRUGGIST will go to press on Wednesday instead of Thursday, owing to the approaching Easter holidays. Correspondents will please note this and those who wish to advertise in the Coloured Supplement, should send in their advertisements not later than the afternoon post on Wednesday.

COLONIAL TRADE.

If there is one thing more certain than another regarding the future export trade of the United Kingdom, it is that the population of our Empire beyond the seas will be our best customers. The national statistics prove this, the imperialistic spirit maintains it, and it behoves manufacturers and merchants to encourage it. The encouragement of colonial trade has been one of THE CHEMIST AND DRUGGISTS' strong points from the outset. Through our annual Colonial Issue we give an exceptional opportunity for advertisers to increase their business with the colonies. This issue will be on April 20, and, in addition to those who receive it weekly, it will be sent to all buyers of druggists' goods in India, Burmah, Ceylon, Straits Settlements, Federated Australia, New Zealand, South Africa, China, Japan, and the West Indies. The Publisher will give any inquirer information regarding this important issue.

Summary.

INDIARUBBER GOODS are cheaper in the United States (p. 509).

Two lots of drug-contracts which have been settled are given on p. 506.

MR. THOMAS TICKLE, Ph.C., B.Sc., has been appointed public analyst for Exeter (p. 504).

A NEW "FLORA OF FRANCE" has just been published. It appears to be good (p. 507).

THE NEW ITALIAN LAW respecting the sale of quinine has passed, and is summarised on p. 510.

SEVERAL PHARMACEUTICAL DINNERS are reported on p. 515 and the Chemical Society's one on p. 538.

MR. D. B. DOTT as *Parus britannicus*, var. *Methylmorphinus*, is the latest addition to the fauna (p. 515).

SIR J. B. MAPLE is opposed to the Early-closing Bill (p. 519). Chemists generally are in favour of it (p. 522).

REPORTS of provincial and other elections continue to testify the popularity of drug-trade candidates (p. 505).

THE WINE-LICENSING season has begun, and a number of West London chemists have obtained licences (p. 506).

AUSTRALIAN AND INDIAN OPINION on the Addendum to the British Pharmacopœia are, on the whole, favourable (p. 508).

THE PARIS SOCIETY OF PHARMACY has not found in Albion a suitable pharmacist for its corresponding membership (p. 507).

THE MEDICINES which were most popular amongst doctors in Australia at the end of the nineteenth century are mentioned on p. 508.

AN illustrated, instructive, and practical article on bacteriology for pharmacists is contributed by Dr. W. Harrison Martindale (p. 511).

THE WHITSTABLE MERCURY-OINTMENT CASE has been decided in favour of the chemist, but the ground of the decision was not stated (p. 529).

MR. JAMES PATERSON gives his reasons for considering that members of the Pharmaceutical Council are not officers of the Society (p. 537).

ALUM BAKING-POWDER makers in Arkansas are retaliating against their opponents by promoting a Bill to prevent the sale of cream of tartar (p. 509).

THE NORMANTON DOCTOR'S DISPENSER who gave strychnine for santolin is charged with causing the death of the children who took the powders (p. 505).

THE WANDSWORTH MAGISTRATE regarded as too trivial a charge against a local druggist for giving gall-ointment when gall-and-opium ointment was asked for (p. 529).

NEWS FROM JOHANNESBURG and the Transvaal indicate a return of business. Government store-prices for some druggists' commodities are mentioned in a note on p. 509.

CONTINUED depression prevails in the drug and chemical markets. Expressed almond oil is 1d. lower. HGH peppermint oil is firmer. Galls and opium are easier (p. 538).

Bacillus coli communis ferments glucose, about 50 per cent. of lactic acid being in the products. Dr. Harden has investigated the matter, and reported to the Chemical Society (p. 537).

VALUABLE WORKING FORMULÆ for metallic oleates have been devised by Mr. W. A. H. Naylor and communicated to the Chemists' Assistants' Association. They are printed on p. 524.

MORPHINE AND PILOCARPINE were the pharmaceutical topics at the last Chemical Society meeting, Wellcome Researchers contributing papers on the constitution of these alkaloids (p. 537).

THE LAST ANALYTICAL MIXTURE consisted of ammonia alum, calcium phosphate, and calcium oxalate. The prizes go to Leeds and Cowbridge. The tournament is finished and prizes awarded (p. 500).

DISPENSING SOLUTIONS is the subject of a useful paper by Mr. H. Forster, of Wolverhampton, reported on p. 525. Mr. Miller had something to say on an allied subject at the London Dispensers' meeting this week (p. 528).

MR. R. J. MOSS, who has conducted our Corner for Students since 1869, is giving it up. Dr. Leonard Dobbin will conduct it in future. Appreciations of Mr. Moss's work by Dr. Attfield, Mr. Wootton, and Mr. Shenstone, F.R.S., are printed on pp. 502 and 503.

Corner for Students.

QUALITATIVE ANALYSIS.

A MIXTURE of not more than three salts will be prepared by Dr. Leonard Dobbin as the subject of the next exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a *stamped and addressed envelope*, not a stamp merely) will be received up to Tuesday, April 2, and the samples will be posted on April 4.

Students' reports will be received up to Monday, April 15. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

REPORTS.

The subject of the last exercise was a mixture of salts containing equal parts of ammonia alum, calcium phosphate, and calcium oxalate.

The calculated composition of such a mixture is as follows—

Al	...	...	...	...	2.02
Ca	...	...	...	...	21.03
NH ₄	...	...	...	...	1.32
P ₂ O ₅	...	...	...	...	20.43
SO ₄	...	...	...	...	14.11
C ₂ O ₄	...	...	...	...	17.89
H ₂ O	...	...	...	...	23.20

100.00

The only impurities of note were traces of iron and chlorine.

Packets of the mixture of salts were sent to 118 correspondents, and 70 reports of analyses were received in reply.

The failures in the detection of the several constituents of the powder were:—Aluminium 15, calcium 5, ammonium 12, phosphoric acid 5, sulphuric acid 5, oxalic acid 34. It is interesting to note that thirty students reported the detection of magnesium, though it was not present, except in such minute quantity that it could only be detected with difficulty.

Two of the general tests usually applied in the preliminary examination of a solid gave distinct indications of the probable presence of an oxalate. When the powder was heated in a bulb-tube a marked change of colour took place: the white powder became grey, and with continued heating it became white again. This is just the way the oxalates of the alkali earth-metals behave. It was found that the residual white mass had a strongly alkaline reaction, whereas the reaction of the original powder was acid. Those who examined the grey residue found it effervescent with acids. In either case the change effected by heat was very suggestive of an oxalate.

When the powder was treated with strong sulphuric acid—a test that should always be used in the preliminary examination for acids—there was no apparent change at first, but on warming brisk effervescence ensued, and carbon dioxide could be detected in the gases evolved. If one had been able to operate on a sufficient quantity of the powder, carbon monoxide might also have been detected. It was, however, sufficient to note that under the influence of heat, and without appreciable carbonisation, sulphuric acid decomposed a constituent of the powder, and caused an evolution of carbon dioxide. This fact, taken in conjunction

with the effects of heat on the powder, already observed, left very little doubt of the presence of an oxalate. To detect the oxalate in the wet way, according to the usual procedure, the powder was boiled with sodium carbonate. It was at this stage that many of our contributors failed. Calcium oxalate is only very slowly acted upon by a boiling solution of sodium carbonate. The presence of other salts in the mixture, which were more readily decomposed, still further retarded the action of the carbonate. It was only by repeated boiling with fresh quantities of sodium-carbonate solution that a complete transposition of the oxalic radicle could be effected. For mere qualitative purposes, however, it sufficed to continue the boiling for five minutes. The filtrate, acidulated with acetic acid, then gave an immediate precipitate with calcium chloride, and sufficient precipitate could be collected to observe the effects of heat upon it.

The magnesium detected by so many students was nothing more than calcium which they had failed to completely remove. It was not at all easy to remove the last traces of calcium. The best plan was to evaporate the filtrate from ammonium carbonate to dryness, expel ammonium salts, dissolve in the smallest quantity of dilute hydrochloric acid, add ammonia and ammonium oxalate, and filter.

I cannot conclude this—my last contribution to the Students' Corner—without bidding my many correspondents farewell. I am sorry that increasing demands upon my time render it impossible for me any longer to give the work the attention it requires. Many years of association with the Corner have developed a kind of affection for it, and I have come to regard it as a child of my own. It is a satisfaction to know that in future the Corner will not be entrusted to the unsympathetic guardianship of a stranger, but that it remains in the family, and will become subject to the tutelage of a former contributor. Dr. Leonard Dobbin, who takes over the management of the Corner, is more in touch with students and better acquainted with their requirements than I am. I feel confident that in his hands the Corner will win fresh laurels in the advancement of scientific education.

My connection with the Students' Corner has been of a most agreeable nature; in the many years it has lasted I cannot recall an unpleasant incident. To three successive editors of THE CHEMIST AND DRUGGIST I am indebted for many acts of kindness and consideration. To the many students who have from time to time contributed I return my sincere thanks for the trouble they have taken to render my task an easy one. I thank them, too, for the patience they have shown under criticism which, in the nature of things, must sometimes have been undeserved.

RICHARD J. MOSS.

The Laboratory, Royal Dublin Society,
Leinster House, Dublin.

PRIZES.

The First Prize for the best analysis has been awarded to
ARTHUR RHODES, c/o Mr. F. Pilkington Sargeant, F.C.S.,
Leeds College of Pharmacy, 19 Springfield Place,
Leeds.

The Second Prize has been awarded to
J. LISTER LLEWELLYN, Cowbridge.

MARKS AWARDED FOR ANALYSES.

A. Rhodes (1st prize)	...	100	Anilin	...	...	90
J. L. Llewellyn (2nd prize)	98		Omega	...	...	90
J. R. Stott	...	96	Corks	...	...	90
W. Maxwell	...	96	Epoc...	...	...	89
Jegow	...	94	A. T. Hope	...	...	89
E. M. Leese	...	90	Pharmacy	...	...	88
Pinus Silvestris	...	90	Phenol	...	...	87

Arthur Moore	...	87	Nomen	...	77
Thistle	...	86	Bresci	...	77
J. M.	...	86	Emerson	...	76
A. W. A.	...	85	Loughlorne	...	76
Spes	...	85	Piper Long	...	75
Three Spires	...	85	Marcus	...	73
Tinct. Card. Co.	...	84	F. W. H.	...	70
J. F. Stratton	...	84	W. W.	...	69
Sipido	...	84	John L. Ross	...	68
W. H. P.	...	83	W. K. Blair	...	66
Africa	...	83	S. A. M.	...	65
Integer	...	82	Pepo	...	63
Loncih	...	82	Salophen	...	62
Cwm	...	82	Aurum	...	60
G. R. P.	...	82	Amar	...	60
H. M. Winton	...	81	Castilian	...	59
S. V. R.	...	81	Salis	...	58
Hawthorn	...	81	Silver	...	57
S. E. Cleaver	...	80	Acetal	...	56
Iridium	...	80	H. C. P.	...	55
Granby	...	80	W. M. A.	...	54
Algol	...	80	Belgrave	...	52
Helpful	...	80	Desperandum	...	50
Amaryllus	...	79	D. J. Dickinson	...	48
Akarana	...	79	M. S. T.	...	48
X. Y. Z.	...	78	Westminster	...	45
Lester	...	78	Anuna	...	40
P. O. P.	...	78	Lux I.	...	38

THE TOURNAMENT.

On September 29, 1900, we offered two sets of aggregate prizes for the competition during the winter months—October, 1900, to March, 1901—the first set to consist of

A first prize of books, value 2*l.* 2*s.*, and a certificate to the competitor who takes the highest aggregate of marks in the six analyses; and a *proxime accessit* prize of books, value 1*l.* 1*s.*, and a certificate to the competitor who takes the second highest aggregate of marks in the six analyses. The competition has been keen, and 184 individual students have engaged in it from first to last. The last analysis has shifted the leaders somewhat, but the first place and the first prize is retained by

“C. W. M.” (Mr. E. H. Harry, 357 Old Town, Clapham), whose marks for the six months have been 98, 96, 100, 96, 95, and 82, or an aggregate of 567.

The second prize winner is Mr. J. R. Stott, c/o Mr. W. M. Martin, Kelso, whose aggregate is 547, made up as follows: 96, 71, 99, 98, 83, and 96.

There is a tie for the third place, two competitors having 546 marks each, as follows:—

“Integer” (Mr. W. W. Hole, 6 Radcot Street, Kennington, S.E.), 85, 98, 94, 95, 92, and 82=546.

Mr. W. Maxwell, c/o Mr. W. M. Alexander, Kelso, 96, 79, 94, 98, 83, and 96=546.

To both we shall send certificates, and any one of the three books published by THE CHEMIST AND DRUGGIST mentioned later.

The second set of book-prizes was promised to competitors who, beginning amongst the last third, show the steadiest progress upwards during the six months.

Twenty-one competitors qualified for these prizes in the first competition, but among them were four stayers only. “Amar” commenced with 53 marks and finishes with an aggregate of 424, showing an average of 74.2 after the first analysis, the highest award being 94 and the lowest 60. “Amar” is Mr. A. Marsland, 87 Stamford Street, Cockbrook, Ashton-under-Lyne. The next most progressive competitor is “Pharmacy” (Mr. H. B. Holstead, Bank Street, Rawten-stall), who, commencing with 70 marks in October, made an aggregate of 453, with an average of 76.6, the highest award in this case being 94. To these competitors we shall send copies of “The Art of Dispensing,” Proctor’s “Manual of Pharmaceutical Testing,” and “Practical Methods of Urine Analysis.” The first and second prize takers in the tournament will inform us what books they desire.

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

Note.—All communications should include the names and addresses of the writers.

PINUS SILVESTRIS.—The precipitate you assigned to magnesium was due to calcium. When a calcium salt is precipitated as carbonate the filtrate is rarely free from calcium; if much ammonium chloride is present a good deal of calcium will remain in solution at first. Calcium phosphate is not nearly so soluble, hence the precipitate produced by adding sodium phosphate.

ANILIN.—A careful analysis of 4 grammes of the powder failed to show an appreciable quantity of manganese. See remarks to “Pinus Silvestris.”

OMEGA.—The precipitate you attributed to magnesium was due to calcium. See remarks to “Pinus Silvestris.”

EPOC.—The only proper way of forming an opinion as to the quantity of alkali present is by evaporating the solution from which the other metals have been removed, volatilising salts of ammonium, and observing the quantity of residue.

A. T. HOPE.—You detected ammonium but omitted it in your list of constituents. You found that it was not until the powder had been heated that it effervesced with a dilute acid. This showed that a carbonate was not originally present: it was a product of the decomposition of the oxalate.

THISTLE.—It is strange that you should have obtained a green residue on igniting the powder with sodium carbonate and nitrate, because there was not a trace of manganese in the powder, and it is a most unlikely impurity in your reagents.

J. M.—You gave no reason for concluding that the oxalate you seem to have detected was not present.

SPES.—You are right in stating that the powder did not blacken, but you should have noticed that it turned grey, and became white again on further heating—a change very suggestive of an oxalate of an alkali-earth metal.

THREE SPIRES.—You seem to have detected aluminium, but it is not included in your summary of results.

J. F. STRATTON.—Heating on a knife is a rather primitive way of observing the effects of heat on the powder. Instead of sacrificing the blade you should use an ignition-tube—a tube 3 or 4 inches long, with a fairly thick bulb blown on one end. With such a tube, inclined so that any water that condenses shall not run back into the bulb, you can secure any sublimate that is formed, and any gas or vapour evolved may be recognised by its colour, smell, or some other property. See remarks to “Spes.”

SIPIDO.—It is evident you did not continue the boiling with sodium carbonate long enough to transform the calcium oxalate into calcium carbonate.

INTEGER.—Your examination for acids was good so far as it went, but you should have proved all the ordinary acid radicles either present or absent.

LONCIH.—You seem, so far as we can make out from your report, to have tried to detect oxalic acid in the part of the powder soluble in acetic acid, which could not have contained the acid, as calcium oxalate is not soluble in acetic acid.

CWM.—Ammonia was easily detected in the sublimate formed when the powder was heated in an ignition-tube, and by means of the soda-lime test.

G. R. P.—We tried your experiment and failed to get a trace of sulphuretted hydrogen on warming the powder with dilute sulphuric acid and zinc.

S. V. R.—You may easily be misled by the turmeric-paper test for boric acid; you should always confirm the result by the flame-test.

HAWTHORN.—Compare the flame-coloration of strontium and calcium; the bright crimson of the former can scarcely be confounded with the brick red of the latter.

IRIDIUM.—See remarks to “Hawthorn.”

GRANBY.—The rough test you used to detect ammonia is not sensitive enough to detect the small quantity that may be present in a mixture of several salts. You should use a test that does not require heat or necessitate the presence of much water.

ALGOL.—You must have made some mistake in your attempt to detect phosphoric acid. The molybdate test, applied just as you described, gave an abundant precipitate of yellow crystals.

AMARYLLUS.—You concluded from the darkening in colour when the powder was heated that an oxalate might be present; you should have gone a step further, and tried whether a carbonate or oxide was produced by the ignition.

AKARANA.—See remarks to J. F. Stratton.

X. Y. Z.—Your remark that there was no change of colour when the powder was heated shows careless observation; the change was very marked.

LESTER.—The precipitate you mistook for silver borate was silver sulphate. Compare the reactions experimentally, and you will find there is a marked difference.

P. O. P.—You say there was no characteristic effervescence when the original powder was warmed with strong sulphuric acid; there was abundant effervescence, and it was easy to detect carbon dioxide in the gases evolved.

NOMEN.—Your failure to precipitate aluminium as phosphate must have been due to the use of two little ammonium acetate.

F. EMERSON.—You do not say how your aqueous solution was prepared; if you quickly extracted the powder with warm water the solution must have contained nearly all the aluminium.

LOUGHLORNE.—You should have detected aluminium by the method you followed; but there was some advantage in filtering off the precipitate produced on adding ammonium acetate to the solution of the original group precipitate, as it consisted almost exclusively of aluminium phosphate.

PIPER LONG.—See remarks to "Granby."

MARCUS.—The precipitate you obtained with barium chloride was not all soluble in nitric acid, though a great deal dissolved.

F. W. H.—There was no sulphur dioxide evolved under the conditions you mention. You were evidently misled by the irritating acid spray carried over by brisk effervescence.

W. W.—See remarks to "Granby."

S. A. M.—You found the powder was soluble in dilute hydrochloric acid, so it could not have contained a sulphate along with barium and strontium.

PEPO.—See remarks to "S. A. M."

SALOPHEN.—You made no attempt to detect calcium in the ammonia precipitate, which, in the plan you followed, contained the greater part of the calcium as phosphate and oxalate.

AURUM.—The carbon dioxide you obtained was a product of the decomposition of the oxalate. Try the effect of strong sulphuric acid upon oxalic acid or an oxalate.

AMAR.—Before concluding that the calcium precipitate was calcium citrate you should have observed how it behaved when ignited.

CASTILIAN.—You should make an experimental study of the reactions of acetates and of nitrates.

SALIS.—If a sulphite had been present a dilute mineral acid would have sufficed to liberate sulphur dioxide without the application of heat. Silver sulphite is not the only silver salt that darkens in colour under the influence of light or heat.

ACETAL.—Your method for the removal of the phosphoric acid was not properly carried out. The precipitate you disregarded contained the aluminium.

H. C. P.—You seem to have neglected the sublimate obtained on heating the powder because it did not appear crystalline. A crystalline body often deposits in an apparently amorphous form when the sublimate is rapidly produced.

W. M. A.—A mixture of salts containing only the constituents you detected would have dissolved readily in water, whereas you had to use hydrochloric acid to dissolve the powder.

BELGRAVE.—We cannot suggest any explanation of your failure to detect sulphuric acid. The method you describe gave a copious precipitate of barium sulphate.

DESPERANDUM.—Your analysis was very incomplete. You can scarcely claim to have proved that the substances detected were the only constituents of the powder.

D. J. DICKINSON.—You want practice with mixtures of known composition. It takes some experience to form an estimate of the quantity you are dealing with from the appearance of a precipitate.

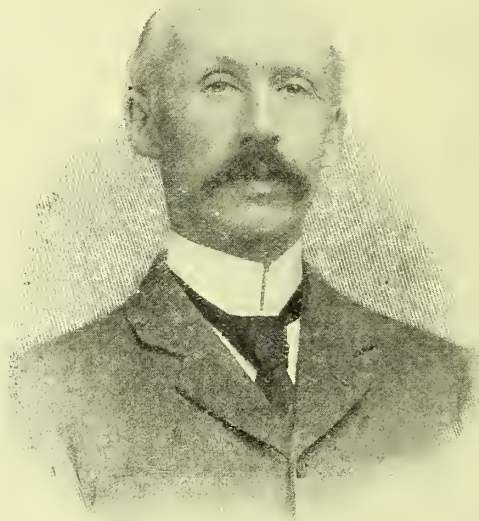
M. S. T.—Heat some of the powder you reserved in an ignition-tube, and carefully note the result. Mix another portion in a watch-glass with dry calcium hydroxide or with soda-lime, very slightly moisten with water, and see if you can detect ammonia by covering the watch-glass with a glass plate with a small piece of moistened red litmus-paper adhering to the under side.

WESTMINSTER.—It was impossible to make a satisfactory analysis of the powder in such a hurry. If the work is worth doing at all, it is worth doing well.

ANIMA and LUX I.—See remarks to "W. M. A."

MR. MOSS'S RETIREMENT.

MR. RICHARD JACKSON MOSS is the only living contributor to THE CHEMIST AND DRUGGIST whose contributions have come in to us in an uninterrupted stream during the part or whole of five decades. Expressions of regret, however admirably worded, on account of his laying down the work which he has so faithfully done since 1869, would be but a feeble reflection of our feelings now. Gratitude for a noble service ungrudgingly rendered has a large share in these feelings. Apart from a slight acknowledgment in the shape of a piece of plate, presented to him by the proprietors



RICHARD JACKSON MOSS F.I.C., F.C.S.

of THE CHEMIST AND DRUGGIST, we have thought it would be well to place on record some expression of the value of Mr. Moss's work by men well qualified to speak of it. And first Dr. John Attfield, F.R.S., as a teacher of many past-prize-winners, tells in the following letter of

THE ORIGIN OF THE CORNER.

SIR,—Your request to me of March 11 has evoked interesting chemico-pharmaceutical reminiscences. Late in the summer of 1868 a friend, ancillary to a conversation between us on pharmaceutical education, reminded me that the British Pharmacopœia of 1867 had just completed one year of its life, and that a certain book on practical chemistry, specially written for apprentices and assistants in pharmacy, was approaching a similar anniversary. The friend was dear old "Jack Brough"—the only name by which he was known to his fellow-workers in science and literature—a man who, more than any other before or since, brought together the pharmacists inside and the pharmacists outside the Pharmaceutical Society. He was at that time the editor of your journal, and six or eight months previously had started in its pages the Corner for Students. During the late summer saunter referred to, which was at Norwich, in the course of the visit of the British Association and the British Pharmaceutical Conference, he followed up his reminder by remarking that "Our young men in the pharmacies thus having a renewed official demand on them to work at qualitative chemical analysis, and a new and specially adapted guide to that subject, now is the time for a fuller development of the pharmaceutico-chemical Corner for Students." Into that Corner, while elaborating (under terrible conditions of health) the other editorial areas, he

himself threw freshened energy for a year or so. Then he placed its management in the hands of Mr. Richard J. Moss, and then—well, within a couple of years, alas! Jack Brough died.

From 1870 to 1896 no session opened at Bloomsbury, where I had been director of the older laboratories since 1862, but found me getting into touch with at least two or three of the new students through their allusion to previous contributions to the Moss Corner. Looking back now, I can name quite a score of those of my old students and assistants who have made a widely known and honourable name for themselves in Great and Greater Britain, who were competitors in the *C. & D.* Moss area. Thence I cannot but conclude that many more home-students have marched more or less directly from the Cannon Street Moss Corner to the evergreen Bloomsbury Square. I do not know of any informal adjunct to pharmaceutical education which has done more unostentatious good in pharmacy than that clear, helpful, informing, and trustworthy Corner. As an author, too, I have to thank its thirty-year conductor for many a hint as useful to me as to the man to whom it was addressed. Hundreds, at least, of pharmacists owe a debt of gratitude to Mr. Richard J. Moss, and will be almost as sorry as you are to lose his long services. Let me add that I cannot think of a more worthy successor to him than Dr. Leonard Dobbin.

*Yours faithfully,
John Atgfield*

THE PROGRESS OF THE CORNER

is here also alluded to. On this matter none is better able to speak than Mr. A. C. Wootton, who succeeded Mr. Brough in the editorship. He writes:—

DEAR SIR,—I learn with regret that my highly esteemed friend Mr. R. J. Moss is discontinuing the conduct of the Corner for Students, with which his name has been associated for so many years. A critical friend once told me that it was the section of *THE CHEMIST AND DRUGGIST* which was its redeeming feature. That I may say, Sir, was long before the *C. & D.* came under its present editorship. Certainly it may be said, without any risk of contradiction, that the Corner for Students was the one feature of *THE CHEMIST AND DRUGGIST* which gave unqualified satisfaction to everybody and at all times. Mr. John Cargill Brough started it in January, 1868, and he carried it on in excellent style for some eighteen months. At that time questions and problems in chemistry and physics were set; actual analyses were not proposed until a year or two later. I remember Mr. Brough telling me one day that he had arranged with one of the competitors in the Corner to take over its conduct from him. I expressed some surprise, for I knew this department was Mr. Brough's pet hobby. "Yes," he replied with the serious humour which characterised him, "but I was obliged to do this or Moss would have wrecked the whole thing, for he could take the prize whenever he chose to try for it."

During the thirty years Mr. Moss has conducted the Corner there have been, I suppose, some fifteen generations of students, numbering in all a thousand, or perhaps nearer two thousand, individuals. Month after month he has checked their work and awarded their marks, and I do not recollect any single instance of a protest or complaint against his judgment. This is testimony not only to Mr. Moss's care and skill, but equally to the good sense of the competitors.

One other matter I should like to allude to. Many readers besides those who competed have admired Mr. Moss's reports, and especially his comments on the individual papers, for their literary skill. The occasional amiable sarcasms which have been incorporated in these comments have spiced them for the general reader, but they have never been of a character to wound or discourage the most sensitive student.

In conclusion, I would like to congratulate *THE CHEMIST AND DRUGGIST* on its good fortune in securing so able and eminent a successor to take charge of "the Corner." Dr. Dobbin was, I believe, a prizeman in it himself, and he will, I am certain, maintain its high reputation and usefulness.

I am, dear Sir, yours faithfully,

A. C. Wootton

We have already mentioned the fact (*C. & D.*, November 24, 1894, page 743) that it was through the good influence of the late Mr. Henry Napier Draper, of Dublin, that Mr. Moss was secured as the conductor of the Corner. The first set of questions by Mr. Moss appeared in our issue of September, 1869, and his name was first given as conductor in November of that year. The analytical exercises were commenced in July, 1871, and have been varied in character, so as to include alloys, alkaloids, and mixtures of inert and active substances, as well as qualitative inorganic analysis. Several thousands of competitors could speak of

THE BENEFITS OF THE CORNER

to them, and on this point we have asked one past prize-winner to favour us with his opinion—viz., Mr. W. A. Shennstone, F.R.S., lecturer on chemistry at Clifton College, whose chemical researches have obtained for him many distinctions, including the blue riband of learning and science:—

DEAR SIR,—What you say is very true. I was one of the prize-winners in your Students' Corner when I was at Bloomsbury Square. So, I think, was my old friend, R. H. Davies, in the same year. I think we only tried once or twice each, and then stood out, thinking we had rather extra good advantage, and that, having scored a win each, we ought to be satisfied. I remember very well being much gratified with the success, and I am sure it did me good and gave me some encouragement. I have always thought your Students' Corner a capital institution, and helpful to a class who do not get too much help or encouragement, alas! I hope you will keep it going. I am sure it is a good work, and worth the doing.

I am, my dear Sir,

*Yours very faithfully
W. A. Shennstone*

THE RECORD.

A few facts in regard to the prizes and prize-winners are appropriate. Exclusive of tournament-prizes and the prizes awarded to-day, exactly 500 first and second prizes have been awarded in the Corner. These have gone to 285 individuals. The record in fruitfulness is held by Mr. A. E. King, of Norwich, who secured fourteen seconds and firsts. Two competitors have taken eight prizes each, three seven each, many sixes, fives, and fours. The Corner has lasted long enough to allow father and son to compete in their proper generations. Thns, Mr. J. F. Brown, of Dover, was

an early prize-winner, and his son a few years ago followed his example. Mr. Moss has, since 1869, supplied us with about 40,000 samples of "salts" for distribution, and has read and reported on nearly 25,000 reports by students. Latterly 300 individual students have competed yearly, but in the early days the number was under 100 a year.

MR. MOSS'S SUCCESSOR.

It is an assurance of the continued utility of the Corner that Dr. Leonard Dobbin has consented to follow Mr. Moss. He is a past prize-winner, and is also an Irishman. As lecturer on chemical theory and assistant in chemistry in the



LEONARD DOBBIN, Ph.D. (Würzburg), F.R.S.E., F.I.C., F.C.S.

University of Edinburgh, he has had exceptional experience of the needs of students of the science, and his position as a pharmaceutical examiner has brought him into touch with students of pharmacy. The assurance that the Corner is transferred into so able hands is the one touch of relief in our parting with Mr. Moss.

English News.

Local Newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Brevities.

Mr. J. G. Lyon, J.P., F.C.S., chemical manufacturer, Carleton Close, has presented to the town of Knottingley the Town Hall, which he recently purchased for 1,365*l*.

On March 22 Mr. G. F. Newman, chemist and druggist, Brixham, met with an accident whilst cycling. He was thrown from his machine and much cut about the face and hands.

A boy named Jackson was remanded at Bow Street on March 23 on a charge of stealing twelve tablets of soap from his employers, Messrs. F. S. Cleaver & Sons, 32 Red Lion Street, W.C.

At Basingstoke on March 19 two boys named Wellspring and Hoskins were each ordered to be birched for stealing bottles of perfume and smelling-salts from Mr. J. E. Turner, chemist and druggist, London Street, Basingstoke.

The Wolverhampton Trades and Labour Council have expressed appreciation of Lord Avebury's Bill for shorter hours, being of opinion that compulsory shorter hours are required, voluntary efforts having proved a failure.

Louis Groppe was convicted at Clerkenwell Sessions of having 150 dozen tooth-brushes, value 28*l*., in his possession, and sent to gaol for three months. The goods were the

property of M. Charles Lounen, of Paris (see *C. & D.*, March 16, page 428).

John Bernard Murless, of Tunbridge Wells, described as a chemist's assistant, was remanded at Ilkeston Police Court on March 25 on a charge of attempting suicide by taking a quantity of acetate of morphia.

The proposal to make an extra charge per dozen on all bottled mineral-waters until the bottles are returned, which should have come into force on March 23 at Manchester, has been indefinitely postponed owing to lack of unanimity on the part of the bottlers.

The Swansea Board of Guardians, in appointing a medical officer for the workhouse at a salary of 200*l*. a year, decided that that sum should cover the cost of all the spirituous liquors the doctor might order, while the Board would provide all drugs and medicines.

At Bolton County Court last week the bankruptcy of a Horwich man named Partington was annulled. Mr. Partington failed whilst carrying on business as a mineral-water manufacturer, but since the failure a relative had left him a considerable sum of money. He had paid off his creditors with 4 per cent. interest.

Dr. Horace Brown, F.R.S., discoursed at the Royal Institution on March 22 on recent work on gaseous diffusion. It was some anomalies in the laws of diffusion as applied to the absorption of carbonic-acid gas by the leaves of plants which led to the discovery that a multiperforate septum, such as a leaf possesses, accelerates the rate of the flow of gases.

Arsenic Commission.

The Royal Commission has visited Manchester and examined, amongst others, Dr. A. K. Miller, a local consulting chemist, Professor H. B. Dixon, Mr. Wm. Kirkby, Mr. Chas. Estcourt, and Mr. Frank Scudder. In the course of his evidence Professor Dixon stated that the larger proportion of sulphuric acid manufactured in Great Britain is made from Spanish copper pyrites. He was asked by Professor Thorpe how so large a quantity of arsenious matter could have got into the sulphuric acid supplied by Nicholsons', and said he imagined the flues contained a very large quantity from the dust-chamber.

Professor Thorpe: Obviously that must have been going on for weeks and months?—The Witness: It must.

Mr. Kirkby's evidence dealt with the investigations by him which are so familiar. He stated that he had not found arsenic in baking-powders or Epsom salts.

Analytical Appointments.

It is reported that the Council of the Institute of Chemistry has been quietly working in opposition to the terms offered by the Corporation of the City of London for the appointment of public analyst—namely, that not less than 400 samples at 10*s*. per sample shall be submitted to the analyst yearly, the fee also to include water analyses. The protest has been backed by several leading analysts, and one or two who were candidates withdrew their applications. Nevertheless, the committee appointed by the Common Council to consider the applications had fully forty to select from, and on Tuesday they interviewed six of them—namely, Mr. Meredith Blyth, B.A., Dr. Samuel Rideal, Dr. F. L. Teed, Mr. E. J. Parry, B.Sc., Professor Worthington Smith, and Mr. Leo Taylor. The names of the first three will be submitted to the Council.

There were eleven applicants for the appointment of public analyst for Exeter, and on the selection of the Sanitary Committee the following appeared before the Council on Wednesday evening last:—Mr. W. H. Lewis, M.A. (Oxon.), F.C.S., Mr. Martin Priest, A.I.C., F.C.S., whose partner, Mr. C. J. Moor, recently resigned the office; and Mr. Thomas Tickle, B.Sc. (London), A.I.C., F.C.S., of the chemical laboratories, Bloomsbury Square, for three years with the late Mr. W. W. Broom, pharmaceutical chemist, Queen Street, Exeter. On a ballot being taken Mr. Tickle was declared elected, the voting being:—Mr. Tickle, 27 votes; Mr. Priest, 18; Mr. Lewis, 8.

L.C.C. Matters.

At a weekly meeting of the London County Council on March 26 the Establishment Committee reported having

received a memorandum from the Water Committee supporting a request by the chemist that he might have authority to employ temporary assistance to carry on general inquiries as to the cause of the action of water on lead. This was agreed to.

It was reported by the Public Health Committee that the chemist had examined 237 further samples of drink and food for arsenic. All the samples had been submitted to a stringent examination; in many instances the testings had been repeated, and by different processes, but in no sample was arsenic detected. In connection with the tests arsenic was added to samples of beer in so small a proportion as 1 part in 2,000,000 parts, and was easily detected.

Chemists in Public Life.

In addition to the list already noted, the following chemists have been elected on various public bodies:—

Mr. John Cadge, chemist, Diss, has been elected a member of the Urban District Council.

Mr. G. J. Gostling, chemist, Stowmarket, has been returned to the Urban District Council.

Mr. A. W. Gardner, chemist, Wickham Market, has been returned to the Parish Council.

Mr. J. W. Lemon, dispenser, has been elected a member of the Norwich Board of Guardians.

Mr. Alfred Gall, chemist, Woodbridge, has been elected a member of the Urban District Council.

Mr. Edward Silk, Wellington Street, Teignmouth, has been returned to the local Urban District Council.

Mr. D. Davison, pharmaceutical chemist, Cromer, has been returned to the Urban District Council.

Mr. Henry J. Bates has been elected a member of the Benwell and Fenham Urban District Council.

Mr. H. W. Blackadar, chemist and druggist, has been elected to the Portsmouth Board of Guardians.

Mr. J. H. Gostling, pharmaceutical chemist, Halesworth, has been elected to the Urban District Council.

Mr. William Corbett, chemist and druggist, has been re-elected on the Bromsgrove Urban District Council.

Mr. Lewis Buttle Ross, Ph.C., F.C.S., Driffild, has been elected a member of the East Riding County Council.

Mr. T. Clifford Palmer, J.P., chemist and druggist, has been elected a member of the Grimsby Board of Guardians.

Mr. Frederick Barlow, chemist and druggist, has been elected a member of the Balsall Heath Board of Guardians.

Mr. V. A. Wills, chemist and druggist, Merthyr, has been elected to the Merthyr Board of Guardians and also to the District Council.

Mr. John Mullett, drug-merchant, 49 Fenchurch Street, E.C., has been elected a member of the Ponders End division of the Enfield District Council.

Mr. F. S. Moore, chemist and druggist, Castle Cary, Somerset, has been re-elected a member of the Wincanton Board of Guardians and District Council.

Mr. W. H. Burrell, chemist, High Street, Sherringham, has been elected a member of the Erpingham Board of Guardians, and also a Rural District Councillor.

The Strychnine-for-Santonin Case.

On March 25 Mr. J. B. Kennedy, dispenser to Dr. Mackenzie, of Normanton, was brought before the Wakefield Magistrates and charged with causing the death of three children by administering strychnine instead of santonin (see *C. & D.*, March 9, page 376). The facts of the case having been stated, accused was remanded on bail for a week.

The Sale of Food and Drugs Act.

At a meeting of the Bridgwater Town Council last week Councillor Collishaw brought forward a resolution in favour of notifying to the Local Government Board that it was desirable to amend the Sale of Food and Drugs Act (1) so as to provide a public department where articles of food might be analysed at a small fee; (2) that the penal clause in the Act in the case of proprietary articles and packed goods apply directly to the manufacturer, producer, or shipper in the first place, and to the retailer or dealer in the second place. Councillor Popham seconded the motion, but the question was referred to the consideration of the Health and Town Improvements Committee.

Birmingham Notes.

Dr. Oliver Lodge recently gave an address to the Ruskin Society on his friend Dr. Walter Myers, the young medical man who died at Brazil while studying malarial diseases.

At a meeting of the Birmingham Natural History and Philosophical Society, held last week at the Norwich Union Chambers, Mr. H. Stone exhibited a number of botanical specimens, the colours being well preserved by means of formalin.

Mr. Ernest Williams Jones, M.R.C.S., L.R.C.P. (son of Mr. H. W. Jones, Director of Wyleys Limited), Prosector in Anatomy and Senior Surgery Prizeman (1900), Mason University College, has been appointed House Physician to the Queen's Hospital, Birmingham.

The retailing of such substances as strong nitric acid calls for special warning, especially to juniors. An accident is recorded by which, owing to the bursting of a tightly-corked bottle of the acid, it is feared that an assistant will lose an eye, the greater part of the contents having gone into his face.

At the annual meeting of the governors of the Birmingham and Midland Homœopathic Hospital held last week it was stated that the new wing being built would cost 5,000*l.* A sum of 3,500*l.* had already been contributed. General Phelps lamented the dearth of homœopathic doctors in Birmingham.

A local paper characterises the fourth annual report of Magors (Limited) as a slight improvement. This is questioned by a correspondent, but the editor defends the description by stating that the "slight improvement" consists in the fact that the net deficiency for the last nine months is only 93*l.* as compared with a loss of 2,874*l.* during the preceding six months.

A considerable amount of sympathy will be extended to Mr. Magor, chemist, of this city, on the death of his only son, which took place at Elandsfontein on March 2. This young gentleman went to South Africa about five years ago, and on the outbreak of the war joined the Cape Railway Pioneer Regiment, but, after going through the campaign, succumbed to enteric fever.

Sir James Sawyer has great faith in the virtues of honey. Speaking to the members of the Warwickshire Beekeepers' Association on March 22 he said that honey was known to him as a nutritious food, as an emollient, soothing inflammation; as a demulcent, a sweetening and softening agent; and as an evacuant. Surely, therefore, said Sir James, it was an article to which more than a passing regard should be given, and surely such food and cure for diseases should be used in preference to the advertised nostrums and tinned quackery of the present day.

The Colonial Confectionery Company (Limited), of Sparkbrook, brought an action at the County Court on March 21 against a trader named Lowther, to recover 10*l.* 7*s.* 4*d.* for table-jellies supplied. The defence was that the jellies were mouldy and would not set. Asked by the Judge as to the composition of the jellies, plaintiff's manager explained that they were made with glucose sugar and gelatin. The case having turned on the question of whether the mould was outside or inside the jelly, his Honour employed a hand microscope to settle the fact, and pointed out that the mould was outside and was probably caused by damp. He thought the jellies were sound, and gave judgment for the plaintiffs, with costs.

The Sale of Chloroform.

At an inquest held at Brighton on March 19, on the body of a woman named Day, the husband stated that his wife had been in the habit of inhaling chloroform for insomnia. A few days before he bought 2*d.* worth of chloroform from Mr. A. H. Cupit, chemist and druggist, Upper St. James's Street, Brighton. That bottle was broken, and his daughter bought her another 2*d.* worth on the following day. Deceased wrapped her head round with flannel, put the chloroform on a piece of flannel, and then inhaled it. Dr. Pugh, who certified that the chloroform had rendered deceased unconscious and suffocated her, told the Coroner that the chemist who sold it should enter the sale in the poisons-book, with the name of the purchaser, and the

purpose for which it was required. The Coroner sent for Mr. Cupit, who replied that he could not attend, as he had no one to mind his shop. He sent word, however, that he had made no entry of the sale of the chloroform in the poisons-book. A verdict of death by misadventure was returned.

Contracts.

Further public contracts have been ratified as under:—

Bexley District Council.—Messrs. Kirkpatrick, Barr & Paton, manganate of soda, in 5-cwt. barrels, 20s. 6d. per cwt. Sanitas Company (Limited), for sanitas powder at 10s. per cwt., fluid at 9s. per dozen bottles, crude fluid 4s. per dozen bottles, soap at 28s. per cwt., carbolic-acid soap at 9s. per dozen.

Boston Union.—Mr. T. B. J. Booker, chemist and druggist, for Howard's quinine at 1s. 10½d. per oz.

Burslem Union.—Jeyes Sanitary Compounds Company (Limited), Cannon Street, E.C., for soaps.

Evesham Union.—Mr. W. Lean, pharmaceutical chemist, Evesham, for drugs.

Gloucester Union.—Mr. Evan G. Hughes, chemist and druggist, Northgate Street, Gloucester, for drugs.

Hollingbourne (Kent) Union.—Mr. Oliver, chemist and druggist, Maidstone, for drugs.

Kingston Union.—Mr. T. H. Vaughan Morris, chemist and druggist, Hereford, for cod-liver oil at 1s. per pint.

Lewisham Union.—Messrs. Willows, Francis, Butler & Thompson, Aldersgate Street, E.C., for drugs; Messrs. Maw, Son & Sons, Aldersgate Street, E.C., for surgical instruments.

Mutford and Lothingland Union.—Mr. A. H. Dodge, chemist, for drugs.

Nantwich Union.—Mr. J. S. Skidmore, for drugs.

Romford Union.—Mr. J. W. Lasham, pharmaceutical chemist, for drugs.

St. Pancras Union.—Messrs. Hodgkinson, Prestons & King for drugs; Messrs. Burgoyne, Burbidges & Co. for india-rubber goods, surgical dressings, proprietary articles, and sundries.

Semington Union.—Mr. J. H. Aplin, chemist and druggist, Trowbridge, for drugs.

Strand Union.—Messrs. Corbyn, Stacey & Co. for drugs.

Upton-on-Severn Union.—Mr. J. Gibbs, chemist and druggist, for drugs.

Wolverhampton Union.—Messrs. Corbyn, Stacey & Co. (Limited), 300 High Holborn, London, for drugs; Messrs. Newton, Chambers & Co (Limited) for Izal carbolic soft-soap at 11s. per firkin of 56 lbs.

At the meeting of the Congleton Board of Guardians on March 22 a letter was read from Mr. H. Williamson, chemist and druggist, Congleton, asking that some of the drugs and surgical appliances required by the Board should be ordered from him. The Board decided to instruct the Medical Officer to give orders for drugs, &c., to the chemists of the town in turn.

Chemists' Licences.

The following have been granted wine-licences:—

Mr. William Henry Strickland, 23 Cromwell Place, South Kensington.

Mr. Edward Cloudesly Perks, chemist and druggist, Sloane Square, S.W.

Mr. Ernest Frank Strickland, chemist and druggist, 214 Earl's Court Road, W.

Mr. John Murison (Parkes' Drug Stores, Limited), for 317 Fulham Road, S.W.

Mr. William Willoughby Evans, chemist and druggist, 192 Fulham Road, S.W.

Mr. Ernest William Gough (Lewis & Burrows, Limited), for 182 Portobello Road, W.

Mr. Edwin Arthur Holloway, chemist and druggist, 161 Goldhawk Road, Shepherd's Bush.

Election of a Dispenser.

At a quarterly meeting of the Governors of Addenbrooke's Hospital, Cambridge, on Monday afternoon, Dr. Donald MacAlister proposed that Mr. W. J. Field, chemist and druggist, who, he said, had been acting for the late Mr. Pashler during his illness, with very great efficiency, be appointed dispenser to the hospital. In doing so he could

only express regret at the loss they had sustained in the death of Mr. Pashler. In Mr. Field, who was a resident of Cambridge, and had had his training there, he was quite sure they had a dispenser in whom they could have confidence. Mr. J. Clark seconded the proposition. He said the Select Governors advertised and had seven or eight applications before them. Great pains were taken to have the best man, and he thought they had got him. The motion was unanimously agreed to.

It was also resolved, on the motion of Dr. MacAlister, seconded by Mr. W. P. Spalding, J.P., to instruct the Secretary to write in the name of the Governors a letter of condolence to Mrs. Pashler on the loss of her husband, who had served the hospital for twenty-four years.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Business Change.

Messrs. Lester's branch pharmacy, Cork, has been removed from King Street to the corner of Harley Street, in the same city.

Personal.

At Dublin on March 23, before Lord Ashbourne (Lord Chancellor of Ireland), Mr. Charles Eustace Price, pharmaceutical chemist, of Athy, county Kildare, was appointed a commissioner for taking affidavits for that town.

Bottle Case.

At the Limerick Quarter Sessions on March 26, Judge Adams consented to state a case in the matter of three Limerick aerated-water makers charged with using Dublin makers' bottles. The case had been remitted to the Quarter Sessions by the Court of King's Bench.

Collodionised Cows.

The Dublin Cowkeepers' Association have asked the Corporation to take steps to prevent the use of collodion on cows' udders, a practice which is said to be prevalent in the Dublin cattle-market. The collodion is used to give an appearance of fulness to the udder.

The Donnybrook Dispenser.

In the case of the dispenser which the South Dublin Union resolved to appoint to Donnybrook dispensary (*C. & D.*, March 23, page 467), the L.G.B. say they are not prepared to sanction a larger salary than 80% a year. The Guardians will have more to say on the matter.

Drug-contracts.

Messrs. Clarke & Co., wholesale druggists, Belfast, have been appointed contractors for drugs and medicines to the Larne Union.

The Guardians of the Waterford Union have appointed the Apothecaries' Hall, Dublin, and the Medical Requisites Company, Cork, contractors for the supply of drugs and surgical appliances respectively.

Mr. J. J. Broderick, chemist and druggist, Fermoy, county Cork, has been declared contractor for the supply of medicines to the Fermoy workhouse and dispensaries; and the Medical Requisite Company, Cork, are to supply the medical and surgical appliances.

The Guardians of the Clonakilty, county Cork, Union have accepted the tender of Messrs. Harrington & Sons, chemists, Cork, for the supply of medicines to the workhouse and dispensaries at 18 per cent. off, and the tender of the Apothecaries' Hall, Dublin, for the supply of surgical appliances.

The following tenders have been received by the Killarney Board of Guardians for the supply of medicines and drugs to the Union:—Messrs. Leslie & Co., Dublin, 16 per cent. off the official list; Apothecaries' Hall, Dublin, 20 per cent. off; Boileau & Boyd, 10 per cent. off; and the Cork Chemical and Drug Company, 12½ per cent. off. The tender of the Apothecaries' Hall was accepted. The Medical Supply Company secured the contract for surgical appliances at 5 per cent. off the list-prices.

Scotch News.

Business Changes.

Mr. J. Gordon Nicholson, pharmaceutical chemist, has purchased from Messrs. J. F. Macfarlan & Co. their retail business at 7 Hanover Street, Edinburgh.

Mr. David Allan, chemist and druggist, Musselburgh, and Mr. W. Messer, of Edinburgh, have acquired from Miss E. Todd the business carried on as the Edinburgh and Leith Aërated Water Company, at Annandale Street, Edinburgh.

Chasing De Smell.

Edinburgh is exercised, in its municipal mind over what is known as the "West End smell." This Moloch has been the subject of complaint in the Haymarket Dalry and Gorgie districts for a number of years, and in 1892 was the subject of a scientific investigation. It had again been decided to ask Dr. Crum Brown, Professor of Chemistry in the University of Edinburgh, to investigate the whole matter, and if possible to locate the smell. Nosologically it appears to emanate from the mash tuns of the whisky distilleries and the breweries of these districts. On second thoughts the Council has decided to hold over the scientific search for the present.

A Question of Population.

Mr. William Crockett, chemist and druggist, Montrose, takes exception to the figures representing the population of Montrose quoted in the paragraph on page 431 of our issue of March 16. He points out that the population of Montrose and its immediate district at the last census was 19,590—an excess of 7,590 on the figures we gave for town alone.

Edinburgh Chemists' Golf Club.

The fixtures for next season include the following:—

HOLE AND HOLE COMPETITION.

1st round of ties must be finished by April 20.			
2nd	"	"	May 11.
3rd	"	"	May 25.
4th	"	"	June 8.
5th	"	"	June 22.
6th	"	"	July 6.

Winner to receive a gold pendant and the runner-up a dozen balls.

On the spring holiday the club will go to New Luffness, when Captain's and club prizes and the Gibson Handicap medal will be played for. At the Braids on May 15 and 18, June 19 and 22, September 4 and 7, and at Dunbar on the autumn holiday the Gibson Handicap medal will be the prize for competition. The Hon. President's and club prizes will also engage the attention of players at Dunbar.

French News.

(From our Paris Correspondent.)

FRENCH TRADE.—The official returns of the Customs Department show that the imports for January and February amounted in value to 29,494,080*l.*, as compared with 29,686,200*l.* in the corresponding months of 1900. The value of the exports during the same period was 23,406,000*l.*, as compared with 23,218,160*l.* in January and February of last year.

A MUSICAL PHARMACIEN.—The students of the Paris Ecole Centrale (one of the schools of engineering here) gave an entertainment last Saturday, the chief item of which was a play in the form of a review of the principal events at the school during the past year. An interesting detail was that the orchestra was led by M. Maurice Fribourg, a pharmacy student with considerable musical talent, who composed the music for the review in a week, and produced some very lively tunes.

THE STUDY OF FOREIGN LANGUAGES in France finds a warm supporter in M. Fumoulet, a leading personality in French pharmaceutical circles and President of the Paris Chamber of Commerce. He is also President of the Commercial Society for the study of Foreign Languages, which held its annual distribution of prizes last Sunday. M.

Millerand, Minister of Commerce, took the chair, and was supported by M. Fumoulet and other members of the committee.

CHEMICAL WINE.—A few days ago, in Paris, a wine merchant named Duval was sentenced to six months' imprisonment for adulterating wine with tartaric acid. Evidence was given to show that in 1899 he purchased 14,000 kilos. of the acid, and 3,000 kilos. during the latter part of last year. Though this was not the first time he had been fined for adulteration he still had the effrontery to threaten an action for libel against a Paris daily newspaper, through which journal his trickery was brought to light.

"THE FLORA OF FRANCE" (Émile Deyrolles, Paris) is the title of a book to which Professor Guignard has called the attention of the Paris Academy of Sciences at its last meeting. This remarkable work, says the eminent Director of the Paris School of Pharmacy, gives a most complete and scientific description of the plants indigenous to France, Corsica, and Alsace-Lorraine. It is intended to replace the famous work of Brenier and Godron, formerly so esteemed by botanists, but now scarcely fulfilling the requirements of modern science. The three authors of the book—MM. Rouy, Foucaud, and Camus—have designated with perfect exactness all the species and varieties actually existing in France. In whatever light the work be regarded this "Flora of France" will render eminent service, by giving a place to every French plant in the nomenclature, and drawing a clear distinction between it and kindred plants. It constitutes a by no means unworthy continuation of the researches of Brenier, Godron and Kirchleger.

PARIS SOCIETY OF PHARMACY.—At this month's meeting, a report was read by M. Collin giving the qualifications of various candidates for the vacancies open as French corresponding members and foreign corresponding members of the Society. It is proposed to elect fourteen of the former and ten of the latter, in accordance with a recent decision to extend the corresponding membership, and the elections will take place next month. The foreign candidates are Messrs. H. Beckurts, editor of the *Archiv der Pharmazie*, Berlin; Schneegans, chief pharmacist of the Civil Hospital, Strasburg; Thoms, professor at the Berlin University; Hans Heger, editor of the *Pharmaceutische Post* Vienna; Ferrein, pharmacist, Moscow; Altan, pharmacist, Bucharest; Balbiano, professor at the Rome University; Van Itallie, professor at the Rotterdam University; Melgar, professor at the Guatemala University; and Möller, professor at the Grüz University. It is perhaps a little disappointing to find that no British pharmacist is included in this list. The French candidates are mostly professors at provincials schools of medicine and pharmacy, and are all of them scientists of distinction.

ALCOHOL IN THE FRENCH COLONIES.—Supplementing his recent order to the Army in France regulating the sale of alcohol to the troops, General André, the French Minister of War, has just issued an order to the generals commanding the French colonial troops prohibiting absolutely the sale of all drinks having alcohol as a base in the military canteens and prescribing a constant control over the traffic in such beverages outside the barracks. The soldiers are ordered to boycott those places which have been reported as selling drinks of inferior quality.—General Gallieni, Military Governor of Madagascar, by a recent decree has appointed a hygienic control over all products containing alcohol (excepting wines, cider, perry, hydromel, and beer), capable of being consumed as beverages, exported to Madagascar and its dependencies. Importers will be permitted to provide themselves, in France, with a certificate of analysis, testifying to the harmlessness of the products to be exported. This certificate may be granted either by the director of the municipal laboratory or by a certified expert chemist or pharmacist, approved by the Tribunal of Commerce of the town in which is situated the works of the exporter in case the latter manufactures the products he exports. If, on the contrary, the exporter is not the manufacturer of these products, from whatever source they may come the certificate of analysis endorsed as above will only be valid if supplied by the director of the municipal laboratory, or by an expert chemist or pharmacist, certified and approved of by the Tribunal of Commerce of the port from which they are sent.

Australasian News.

Chiefly from "The Chemist and Druggist of Australasia,"
February 1, 1901. 6d. per copy, post free.

CHEMISTS' HOLIDAYS.—Amongst the recently-submitted regulations of the Pharmacy Board of New Zealand is one requesting that "every registered chemist who absents himself from the town in which his business is situated for any period extending over one month shall leave such business in charge of his duly-enrolled manager."

AN ANTI-CUTTING SCHEME.—Mr. Frank Kemp, formerly managing director of the Australian Drug Company (Limited), has returned to New South Wales from England. He has obtained the co-operation and support of Dinneford & Co. and other firms in England for an anti-cutting scheme, which is to be a leading feature of his programme.

STRYCHNINE AND FOWLS.—Mr. A. J. L. Eckersley writes to the *C.D.A.* in reference to the statement of Dr. Edward Berdoe in the *C. & D.*, December 15, 1900, page 972, that "the common fowl is the least susceptible of all the lower animals to strychnine poisoning, it requiring ten times as much strychnine to kill a chicken as would suffice to kill a pheasant." Mr. Eckersley relates a case which happened in his experience where four hens and two pigeons were poisoned by a mixture of strychnine and wheat ($\frac{3}{4}$ oz. of poison to a bushel of wheat).

END-OF-THE-CENTURY MEDICINE.—The *C.D.A.*, as the result of an analysis of 7,000 prescriptions dispensed in the last few months of the century, has obtained the following as the order of frequency in which the most-used drugs are prescribed in Australia:—1, *Tr. nucis vom.*; 2, *sodii bicarb.*; 3, *liq. ammon. acet.*; 4, *tr. camph. co.*; 5, *syr. aurant.*; 6, *syr. tolu.*; 7, *aq. chlorof.*; 8, *vin. ipecac.*; 9, *spt. ammon. arom.*; 10, *aq. menth. pip.*; 11, *hydrarg. subchlor.*; 12, *spt. aeth. nitr.*; 13, *potass. iodid.*; 14, *liq. strychn.*; 15, *potass. brom.*; 16, *tr. cardam. co.*; 17, *quin. sulph.*; 18, *ammon. carb.*; 19, *magnes. sulph.*; 20, *potass. bicarb.*; 21, *inf. gent. co.*; 22, *tr. scillæ*; 23, *ac. boric.*; 24, *tr. opii*; 25, *syrupus.*

N.S.W. MEDICAL ACT.—The Medical Act as amended at the end of 1900 is being enforced in town and country. At Sydney Central Court on December 28 Charles David Saunders was fined 50*l.* or a month's imprisonment for using the title doctor, he not being a legally qualified medical practitioner. At Lambton Police Court on January 11 and at Wagga Wagga defendants were fined 50*l.* or three months' imprisonment. At Broken Hill Police Court on January 7 three cases were disposed of: in one a fine of 50*l.*, and 5*s.* 6*d.* costs, was imposed; in another case, in which the defendant called himself a "Professor" of medicine, costs only were imposed; in the third case "Chinese doctor" was held to be not calculated to mislead.

THE INDIAN AND COLONIAL ADDENDUM.—The nine Australasian drugs authorised for use by the addendum in the Australasian colonies are the subject of some comments by the *C.D.A.*, as follows:—*Grindelia*, says our colleague, has already come into use by the efforts of the representatives of American wholesale pharmaceutical chemists; *acacia-bark*, which fills the place of oak-bark, abandoned in the *Pharmacopœia* of 1898. It is exceedingly doubtful whether it will ever be dispensed. *Agropyrum*, or conch grass, was not suggested for use from Australia, but, having been recommended by Hongkong, has apparently been extended to the whole of the Eastern colonies, the Australasian colonies, and the North American colonies, though, as the plant is not found in Australia, or, at any rate, is not mentioned in Muller's Census, the reason for extending it to Australia is not evident. *Alstonia* was recommended from Queensland, and a somewhat similar species was named by one of the Indian committees. *Kava* is practically unknown in dispensing here, unless in the form of a preparation made by an American firm, while *Oliver bark*, recommended by the Queensland authorities, is not an article of commerce, but has been worked up and dispensed by only one or two pharmacists and physicians in Brisbane, and may or may not come into use. Still, the request for the inclusion of *kino*, *Oliver bark*, and *alstonia* was certainly made from these colonies, and the *Pharmacopœia* Committee could only go upon the evidence put before them.

East Indian News.

INDIA'S FINANCES.—The Budget accounts for 1899-1900 show a surplus of 2,744,623*l.*, of which 572,000*l.* is due to the high price of opium.

AERATED WATERS TARIFF.—The Peninsular and Oriental Steam Navigation Company announce a reduction in their tariff for aerated waters; Schweppes is now charged 4*d.*, and other brands of soda 2*d.* per bottle.

THE INDIGO-TRADE.—A telegram from Calcutta, dated March 18, states that the Bengal Government has formally agreed to grant an annual subsidy of 50,000*r.* for three years for further chemical and scientific researches with regard to indigo-cultivation.

IN THE BAZAAR trade stagnation reigns except in one item, perchloride of mercury. For local and outstation requirements the demand for this is very great, and the bazaar have parted with their last pound. The only holders now are a well-known firm who, looking for famine prices, refuse to sell. The stock of quinine in Calcutta in the first week of March was 40,000 oz. (Howards') The price has just been raised by the combine holding supplies.

FELL INTO A DYE-VAT.—The Bombay Coroner recently held an inquest on the body of Joti Succaram, a workman employed by a dyer. It appeared that, on hearing a splash, two other workmen, who were sleeping in a shed, awoke, and from a vat full of indigo liquid, that was nearest to them, succeeded in drawing out Joti. The unfortunate man was dyed blue all over, and death ensued shortly after, being due to accidental immersion, and to poisoning consequent upon having swallowed a quantity of the liquid dye.

THE ADDENDUM IN INDIA.—The February number of the *Indian Medical Gazette* gives a very convenient table of those drugs officially sanctioned for use in India in the Indian and Colonial Addendum of the B.P. A useful feature of the list is the addition of the vernacular names to the botanical names by which the drugs are designated in the Addendum. The publication of the Addendum coincides with the completion of an abortive and somewhat unsatisfactory report of the Bengal Indigenous Drug Committee. The committee were unable to come to any definite conclusions about a number of native drugs they examined. Dr. C. F. Poynder and Mr. D. Hooper have also recently completed an admirable materia medica for India.

PERSONAL ITEMS.—Mr. Thos. Stephenson, F.C.S. (Phillips & Co. (Limited), Bombay, has just been gazetted to a second Lieutenancy in the Bombay Volunteer Rifles—Messrs. Bathgate & Co., Smith, Stanisreet & Co., and R. Scott Thomson & Co., of Calcutta, each contribute 250*r.* to the Queen Victoria Memorial Fund.—Some changes are about to be introduced into the working of the Economic Branch of the Indian Museum. Mr. Buck, the newly appointed assistant to Dr. Watt, is expected to reach Calcutta on March 23. Dr. Watt himself is to devote his time for the next year to compiling, in one volume for ready reference, a summary of the more voluminous Dictionary of Economic Products, which now extends to nine volumes. After completing this Dr. Watt will devote five or six years to revising and completing the dictionary.

A TRADE-MARK CASE.—At the Bombay High Court, on March 4, application was made by the Badische Anilin- und Soda-Fabrik Company for the admission of a plaint, and also for an injunction, against Fatchchund Sujarmull, of Calcutta, dealers in dyes. Defendants had been selling and offering for sale in Calcutta green dye packed in boxes and wrappers with labels affixed similar in appearance to those of the plaintiff company's manufacture. The plaintiff's manager in Bombay prosecuted the defendants in the Police Court under the Merchandise Marks Act, and obtained a conviction. Against that conviction they appealed to the High Court, and it was set aside as there was not sufficient evidence. Since then the defendants had continued to sell the dyes, which seriously damaged the business of the plaintiffs. In the result the Judge allowed the plaint to be admitted, and granted an interim injunction.

American Notes.

TO ASSIST ELOQUENCE.—Following their long-established custom, Messrs. John I. Brown & Sons have sent to the State House the usual complimentary boxes of bronchial troches, for distribution among the members of the Senate, the House, and elsewhere in the Capitol building. Several hundreds of the boxes were supplied—for the members of the House, 240; for the Senate, 40; for the messengers, 20; and for the official reporters a dozen or more were required.

THE CUTTING WAR.—The fight between the allied forces of the N.A.R.D., the P.A. of A., and the N.W.D.A. on the one hand, and a combination of some of the departmental stores and inveterate cutters on the other, proceeds more or less merrily. The stores proclaim the old story of being able to procure unlimited supplies of proscribed proprietaries with the greatest of ease, and New York commercial papers give their views publicly. But the other side is equally confident and equally in earnest, so the outcome of the struggle will be watched with interest.

CREAM OF TARTAR TO BE BARRED.—A war is being waged between the cream-of-tartar and alum baking powder manufacturers of Arkansas. The cream-of-tartar makers have secured the introduction of bills in a number of legislatures which are preventing the sale of alum baking-powder. The manufacturers of the latter commodity have retaliated, and a Bill has been introduced, read twice, and referred to the committee on the practice of medicine, which seeks to enact that seeing that

Bitartrate of potash, as used in combination with bicarbonate of soda for aerating, or leavening, or preparing farinaceous foods, does, by its chemical reaction, leave in such foods 96 per cent. tartrate of potash and soda (commercial strength) in combination, or in such quantities as is believed to impair and undermine the health of many people who use it, the said bitartrate of potash shall not be sold or offered for sale, either in combination with bicarbonate of soda or separately, for the purpose of aerating, leavening, or preparing farinaceous foods, or used by vendors of food-products for aerating, leavening, or preparing such food-products.

A fine of \$500 and six months' imprisonment is proposed for each violation.

BREAK IN RUBBER PRICES.—The Association of Manufacturers of Druggists' Sundries have failed in their efforts to maintain prices on certain lines of goods, owing to the operations of an outside manufacturer, and certain articles, such as rubber bands, are now selling in open market at a big cut from previous prices. While dealers generally have been notified of the revised range for rubber bands, no notice of a cut in the price of hot-water bottles, ice caps, or rubber syringes has been sent out. It is generally understood, however, that the fight to maintain prices on these goods has been given up, and jobbers are free to offer independently of the Association agreement. The break in prices is generally regretted by the leading jobbers, who blame the Association for the new competition and consequent demoralisation of prices.

FLORIDAN PHARMACY.—In Florida there are estimated to be about 275 druggists, or an average of a little more than one to each 2 000 square miles of territory. The Board of Pharmacy there never meets to hold examinations, although it is required to. Whenever an applicant desires examination, he applies to the secretary and deposits \$3, receives four sheets of twenty-five questions each on four different subjects. When he has answered these questions he returns them to the secretary, who sends one set (twenty-five each) of the questions to four different members of the Board. After all the papers have been corrected by the different members, they are returned to the secretary, who makes out the percentage of all, 70 per cent. being required to pass. If the applicant fails, his money is returned. The secretary does not remember when the Board last met. Yet in the city of Jacksonville there are some as finely appointed and well-conducted drug-stores as are to be found anywhere. There was once a state pharmaceutical Association in Florida, but it is reported dead.

South African News.

(From our Colonial Correspondents.)

PERSONAL.—Mr. J. R. Williams, consulting metallurgical chemist to the Rand Mines Corporation, has been permitted by the British military authorities to return to Johannesburg.

RUBBER IN N.E. RHODESIA.—The rubber district round the southern end of Lake Bangweolo has been largely devastated through the vandalism of the natives, a carelessness in the method of gathering, and the wholesale destruction of the plant in search of the root-rubber. On the Loangwe, near Molilo, Mr. Highfield, a former resident of Salisbury, is farming and planting Brazilian rubber.

"GAZETTE" NEWS.—It is notified in the Johannesburg *Official Gazette* that the banking-account of Mr. Fred Ingram, chemist and druggist, 73 Smit Street, Braamfontein, Johannesburg, is released from the operation of Lord Roberts's proclamation of June 5, 1900.—A guaranteed serum, described as anti-pneumonia vaccine, for lung-sickness, is advertised in the same *Official Gazette* as being obtainable from Mr. E. Hjort, care of Messrs. Jolly & Adcock, chemists, Rissik Street, Johannesburg.

A NOTE FOR REFUGEES.—In Johannesburg everything in the comestible line is still very scarce, and groceries are dealt out once a week at the Rations Stores on the ration scale, which has many drawbacks, and is a cruel ordeal of long waiting in the hot sun for women and those not so able to stand the worry and fret of a jostling crowd as a mere man is. Vegetables are hard to obtain. Potatoes and onions can be had at 10*d.* per lb.; meat at 1*s.* 4*d.*; chickens, 7*s.* 6*d.*; eggs, 9*s.* to 10*s.*; pumpkins, 8*s.*; and other articles, when procurable, in like proportion.

PLAGUE-DISINFECTANTS.—In addition to other drastic precautions the Cape Town Council have decided to supply Jeyes' fluid and carbolic acid to anyone applying for them and bringing a receptacle. A sanitary dépôt has been opened, where these disinfectants may be obtained free of charge during the continuance of the plague. In the disinfecting of houses which have become contaminated by plague-patients formic-aldehyde gas is used, the rooms being first hermetically sealed. After this the paper is removed, and the walls are sprayed with a strong vapour of formalin. These precautions are carried out under the medical officer of health.

IMPORTS INTO THE TRANSVAAL.—In the case of all goods imported into those portions of Transvaal territory in the occupation of the British forces the following conditions apply:—

(a) That a permit for such importation has been previously obtained from a Military Governor or District Commissioner, or some officer duly authorised by him;

(b) That Customs duties are paid on all goods imported. These duties shall for the present and until further provision is made therefor be levied according to the tariff fixed by the Government of the South African Republic as set out in pages 111 to 116, inclusive, of the "Staats Almanak" voor de Zuid Afrikaansche Republiek, 1899.

On goods imported through Cape Colony or Natal the duty is collected in those colonies. Any goods imported contrary to these regulations are liable to confiscation, and the importer makes himself subject to a fine.

OFFICIAL PRICES OF DRUGS AND FOODS.—In the official list of prices of the Imperial Government Relief and Supply Stores, which came into force on February 25, we find the following interesting items:—Acid (tartaric), 3*s.*; acid (citric), 2*s.* 10*d.*; arrowroot, 8*d.*; ammonia (Scrubb's), 2*s.*; bovril (2 oz.), 1*s.* 8*d.*, (4 oz.), 3*s.* 4*d.*; borax, 2*s.* 10*d.* per lb.; coriander-seeds, 10*d.*; cloves, 1*s.* 1*d.*; cassia (ground), 1*s.* 5*d.*; cinnamon, 1*s.* 8*d.*; cream of tartar, 1*s.* 9½*d.*; Eli-man's embrocation, 1*s.* 8*d.*; fruit-salt, 3*s.* 1*d.*; Neave's food, 1*s.* 6*d.*; Nestlé's food, 2*s.* 2*d.*; Bengers' food, 1*s.* 10½*d.*; Savory & Moore's food, 1*s.* 6*d.*; "Lemco" (2 oz.), 1*s.* 10*d.*, (4 oz.), 3*s.* 7*d.*; lime-juice cordial, 1*s.* 10½*d.*; castor oil, 6*d.* to 11*d.*; Keating's insect-powder, 7½*d.*; carbolic powder, 11½*d.*; Epsom salts, 9*d.*; soda bicarb., 1*d.* per oz.; Pears' soap, 6*d.*; seidlitz-powders, 10½*d.*; Seigel's syrup, 2*s.* The above are, of course, retail prices, for wholesale quantities a deduction of 7½ per cent. is allowed.

Colonial and Foreign News.

A BRONZE MEDAL has been struck by Professor Hildebrand, of Munich, in memory of Pettenkofer.

PERSONAL.—Mr. F. C. Laing and Mr. W. S. Roberts have been admitted partners in the firm of Macleod & Co., drug and produce merchants, Manilla.

HYGIENIC EXHIBITION AT BELGRADE.—An international exhibition of hygienic and food articles will be held at Belgrade, Servia, in April. A committee has been appointed for the purpose of furnishing information to interested parties.

MR. GEORGE SPEYER, banker, of Frankfort-on-Main, has given a million marks to the town for the benefit of science. He desires the money to be devoted to the establishment and maintenance of the teaching of science and the establishment of scientific laboratories.

MORE CARLSBAD.—It is reported from Vienna that a new hot spring has been discovered at Carlsbad. The new spring is said to yield from 400 to 800 litres of boiling-water per minute, while the old "Sprudel" yields but seventy-five litres in the same time. It is quite near the old spring.

ARMY APOTHEKERS.—At a meeting of the Army Budget Committee of the Diet at Berlin last week, Count Oriola's proposals with regard to a reorganisation of the present system of army apothekers were accepted. It is proposed to improve the regulations regarding training and promotion, and to increase the pay.

NEW TARIFF FOR BRITISH HONDURAS.—On February 1 a new tariff went into effect in British Honduras, reducing the duty on articles "not otherwise specified" from 12½ per cent. to 10 per cent. This term includes drugs, chemicals, medicines, soaps, and perfumery. A duty of \$4 per lb. is levied on opium, and one of \$2.50 per gal. on spirits.

CUTTING AT AUCKLAND.—For the last two or three months Auckland, N.Z., has been in the throes of a competition of cutting. The ball was opened by Mr. Jefferson, of the Symonds Street Pharmacy, opening a new shop in Queen Street and advertising dispensing and proprietaries at reduced rates. Other chemists have followed, with serious effects on the business of the majority of the chemists.

PERFUMERY IN POLAND.—The Russian Government have increased the import duty on spirit in Russian Poland, which will have the effect of compelling perfume manufacturers to advance prices of their products about 35 per cent. The import of foreign perfumery to Poland is therefore expected to largely increase in the near future. The increased duty applies from July 1 next.

THE FLORIDA SPONGE-FISHERY.—The total yield of sponges in the three districts of Key West, Tarpon Springs, and Apalachicola during 1900 was 364,900 lbs. (\$567,684) against 304,400 lbs. (\$367,914) in 1899. During the last five years the total value of the crop has increased by 58,870 lbs. and \$181,000 in value. The custom of loading sponges with sand is again being practised in lieu of an advance in quotations.

COMMERCIAL MUSEUM IN CARACAS.—The Chamber of Commerce of Düsseldorf states that a commercial museum will shortly be instituted at Caracas to exhibit European industrial and art products. Branch museums will be opened in Valencia, Maracaibo, Ciudad Bolivar, Barquisimeto, and other suitable places. Goods for the museum will be admitted free of duty, and no expenses will be charged to the exhibitors.

SICILIAN SULPHUR COMBINATION.—In connection with the renewal of the contract for another five years between the Anglo-Sicilian Sulphur Company and the producers of sulphur in Sicily, it is interesting to note that when the company started business in August, 1893, they controlled about 80 per cent. of the total production. This percentage has since been reduced to about 55 per cent. on account of the opening of new mines and improvements in mining.

JAPANESE TRADE IN 1900.—The official declared value of the exports from Japan during 1900 is given as 19,875,382/., showing a decrease of 1,530,115/., against the total for 1899. The value of the imports, on the other hand, is given as 28,240,363/., and shows an increase of 6,250,517/., as against 1899. The stocks of imported goods in the open ports of Japan at the end of the year were said to amount to upwards of 4,000,000/., in value, of which 2,000,000/., was held in Yokohama.

QUININE IN ITALY.—We have received a copy of a new law regulating the price of quinine in Italy, which has just been signed by Victor Emanuel III. The law, No. 505, is dated December 23, 1900, and consists of ten clauses. Clause 2 lays down the price at which quinine shall be sold to the public in gramme-tubes as 40 centesimi (3.8d.) for the hydrochlorid, and 32c. (3d.) for the sulphate or bisulphate. The detailed regulations are not yet issued from the Government printers, but are promised "shortly." The new law is meeting with considerable opposition from the Italian pharmacists, and it may be some time before the public will benefit by the reduced prices. The price at which quinine is at present sold in Rome is 5¼d. for a gramme of sulphate, or 9¼d. for the hydrochlorid.

INSURANCE FOR DRUGGISTS.—One of the latest things in the casualty line in New York is to insure druggists against what is called the wrong-prescription man. For \$15 or \$25 a year several companies in New York guarantee druggists against damages arising from mistakes in compounding drugs. One of the most successful of these companies has 950 chemists—in New York, Jersey City, Newark, and New Haven—on its list of subscribers. The idea of insuring druggists against loss from their own mistakes originated in the belief of a number of leading pharmacists that they were the victims of a gang of rogues who made a practice of pretending that wrong medicines had been given to some member of their families, sometimes with serious results. The gang was partly broken up by the fidelity company which first assumed the responsibility of protecting druggists at \$5 a year each.

TRADE-LICENCES AT BEIRA.—A dispute concerning the imposition of trade-licences at Beira by the Mozambique Company has reached somewhat serious proportions. The local Chamber of Commerce object to the payment of these under the tariff authorised by a Government Order dated December, 1899, and, after meeting, the merchants agreed to close their businesses unless the order was abrogated. This they were fully determined, to do, and business was arranged to be suspended on February 20. The Governor, seeing the merchants were determined, asked them to reconsider the decision arrived at, and he would at once communicate with the authorities in Portugal as to the deadlock in trade which was likely to arise if the tariff were not suspended. This suggestion was put to the members of the Chamber of Commerce, and they finally agreed to resume business until a reply to their representations was received from the King of Portugal, to whom an appeal had been sent by the President of the Chamber direct.

SULPHUR DEPOSITS IN JAPAN.—The New York *Engineering and Mining Journal* contains a description of a recently opened source of sulphur supply in the little island of Etrofu, which is situated about halfway between the extreme northern point of Japan and the southern point of Kamchatka. The island is volcanic: there are on it three cones about 2,800 feet in height, largely composed of sulphur, and the vapours which arise from the centres of the cones are continually adding to the deposits. The island is owned by a Japanese syndicate, which holds a grant from the Government of Japan. The sulphur deposits are about two miles from the coast, and the land surface declines gradually to Moyoro Bay, which is a good harbour, and is about 2,000 miles by water from Yokohama. From May 15 to October 10, 1900, 10,000 tons of the sulphur were mined and transported to the sea-level, 6,000 of which have been shipped to Hakodate, Japan, where a refinery has been established. The remaining 4,000 tons will be refined on the ground at Moyoro Bay. Towards the latter part of the season, when everything was running in full swing, the rope-transmission plant was able to bring down about 3,000 tons per month. The season of 1901 will probably see this new industry well established.

Bacteriological Notes.

By W. HARRISON MARTINDALE, Ph.D. Marburg,
Pharmaceutical Chemist.

WHETHER the absorbing science of bacteriology has been embraced by pharmacists in Great Britain with as much enthusiasm as it has been on the Continent is a question upon which opinions may differ. It would seem that in the microbic handicap we are left behind, by the French pharmacist, for example, who, as all the world knows, prides himself on his analytical work. Again, in Germany a certain amount of bacteriological knowledge is required of the apotheker. Dr. Theodor Paul, at the meeting of the German Apotheker-Verein last year, after paying tribute to Ernst Schmidt's sixteen years' work at the Marburg Pharmaceutical Institute, said:—

That object of pharmaceutical chemistry to which I intend to direct your attention as being of great present importance in connection with public health—bacteriology—has within recent years been found to have very many-sided relations. The practice of medicine now makes such numerous demands upon the physician that he has seldom time to carry out the investigations required for his purposes or to acquire the manipulatory skill which is necessary for conducting them. The conduct of such investigations must therefore be undertaken by pharmacists, and provision must be made that they are adequately qualified for such work. (*P. J.*, 1900, 2, 339.)

He then gave a treatise with much experimental work on the subject of disinfection, using *B. anthracis* and *Staphylococcus pyogenes aureus* as bases for his researches, showing this subject to be capable of elucidation "only by systematic application of the modern views of physical and chemical science."

At the above university the large majority of pharmaceutical students attend a thorough course of bacteriology. Besides this course of lectures which is held in the Hygienic Institut, the students hear a theoretical course in the Botanical Institute.

The director of the Hygienic Institute is Professor Emil Behring, on whom the German Emperor has just conferred the honour of hereditary nobility in acknowledgment of his distinguished services in the evolution of serotherapy. These courses have up to the present been optional for the Reichsapotheker, but the question of increasing the length of the pharmaceutical curriculum (it is already three semesters—a year and a half) is at the moment occupying the attention of the Bundesstaaten, and should the motion be passed it is quite possible that bacteriology and the chemistry of foods will, up to a certain point, be made compulsory. Dr. Gadamer, Professor Schmidt's head demonstrator, informs me that a large new building for the furtherance of food-chemistry, is being added to the Pharmaceutical Institute, including general laboratories, a bacteriological laboratory, a department for forensic chemistry, an auditorium, &c. The main purpose of the bacteriological laboratory shall be to conduct bacteriological investigations arising from the examinations of foods in the general laboratories.

In Holland there are many thorough bacteriologists amongst pharmacists, and although the subject is not compulsory, the majority of pharmaceutical students take out a course of lectures and practical work therein. The bacteriologist at the largest Dutch surgical-dressings factory is a pharmacist, and an apotheker is frequently required to examine urine, sputum, and the like for pathogenic organisms. Within certain limits the pharmacist, when adequately trained, can render the medical man considerable help in his bacteriological pursuits or in diagnosis by preparing culture-media, and by assisting the physician in the carrying-out of the more simple clinical investigations. The pharmacist lacks the necessary knowledge to subcutaneously inject a guinea-pig, for example, with urinary deposit, and examine the same after a fortnight for enlarged tubercular glands; but he does understand the construction of a Bunsen burner, and will show himself to advantage when breaking an egg with the idea of separating the white from the yolk and the ultimate object of clearing culture-media.

APPARATUS.

On the subject of bacteriological apparatus I would like to note one or two improvisations. One is inclined by

experience to the view that improvisations do not repay the perseverance bestowed upon them, however economical they may appear; but the following can be recommended, and will save the chemist from 15% to 20%. The first is an incubator which I have constructed on lines suggested by Mr. C. E. Sage. Secure a wine-case—mine is a champagne one, measuring 16 inches wide, 24 inches long by 10 inches deep (outside measurements, the wood being $\frac{3}{4}$ inch thick). Put a good lid on it, with hinges and fastening-knob. Knock out one end and replace it with a piece of thick tin—e.g., from a glycerin-tin—nailed on securely: this forms the bottom of the incubator. Obtain a small meat tray, measuring about 10½ inches by 8½ inches, and about 2 inches deep; this is to be placed on the tin bottom of the incubator, filled with water and covered with a loose lid. The inner chamber of the incubator is another box of thinner material, measuring about 10 inches by 17½ inches by 7½ inches with door. This box is securely nailed into the wine-case with intervening blocks of wood, leaving a space all round it for the circulation of the moist warm air. It may with advantage have a shelf across the middle.



IMPROVISED INCUBATOR.

A ventilation-hole is made at the top of the case. It is then neatly covered with thick felt and fixed on the wall by means of strong brackets top and bottom. Finally, a carefully selected thermometer is added by passing the same through an indiarubber cork which fixes firmly into a hole in the side of the incubator, the bulb of the thermometer passing right into the inner chamber. The thermometer is further made to project just sufficient so that the temperature 35° to 40° C. can be read from the outside, and by heating the tin base of the incubator with an ordinary luminous gas-flame turned low—not a Bunsen—the necessary temperature—37° C.—may be maintained with only slight variation indefinitely, the only difficulty being the replenishing of the water in the tray from time to time.

Ordinary tie-over 24-oz. jars containing a little cotton-wool are useful to hold culture-tubes in the incubator.

Another improvisation is a steamer costing practically nothing. Select a quinine-tin, 100-oz., the tallest procurable, and one that does not leak. Place a piece of thick sheet-lead into the bottom to weight it, and make it stand firm on an ordinary ring-burner. An intelligent tinsmith can arrange a false bottom of wire netting and a gauge outside to measure the water-content; or, still better, connect on a small supply-cistern as provided with the sterilisers to be purchased at substantial figures. These accessories are not essential, and an old sieve turned upside down will make an excellent false bottom.

THE CLEANING OF COVER-SLIPS.

The usual method of preparing cover-slips for use—some contend that it is not so much grease as excessive polish which one has to overcome before an even film can be obtained—is to boil the slips in potassium bichromate and

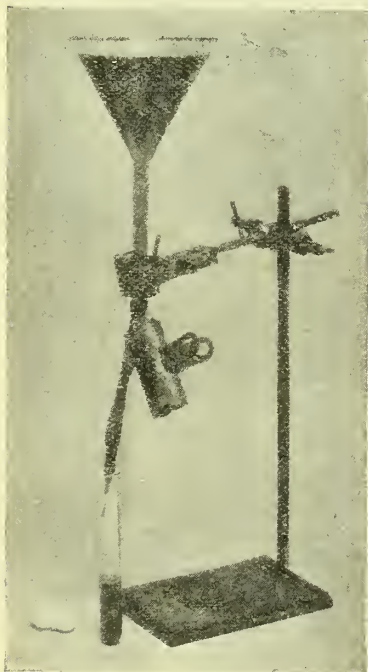
sulphuric-acid solution; but there are numerous methods—some very complicated. Frequently long immersion in cold bichromate and acid, or boiling in aqua regia, will prove beneficial, and sometimes, after treating obstinate circles with the strongest reagents of this kind without success, they will suddenly give a perfect film after a single immersion in alcohol.

CULTURE-MEDIA.

Here may be mentioned the formulæ for preparing the commoner sterile bacteriological nutrient media, supplemented with some practical notes not usually found in textbooks.

Nutrient Broth.—The older method is as follows:—Beef (or horse, &c., flesh) 450 grammes, freed from fat and minced, is extracted for twenty-four hours with cold water 1,000 c.c. The albumen is coagulated by heat and strained off. The resulting extract is boiled ten minutes with sodium chloride 5 grammes, and peptone (in powder) 10 grammes, with occasional stirring. It is then made faintly alkaline with 4-per-cent. sodium hydrate, or with 2-per-cent. sodium carbonate, using litmus as indicator, and filtered.

For filtering all media use a special tough thin French-grey paper, which one should pleat oneself.



FUNNEL AND STAND FOR FILLING TUBES WITH CULTURE MEDIA.

All media are used either neutral or faintly alkaline. Some standardise their media with the aid of decinormal soda, the method being to titrate 5 c.c. of the medium, diluted with 50 c.c. of distilled water, with the alkali, using 1 c.c. of 0.5 per cent. phenolphthalein as indicator—which would seem an unnecessarily large quantity. One then neutralises the bulk with the necessary quantity of soda, and adds "1.5 per cent. normal HCl," as it is believed that the best condition for the growth of bacteria is at a point about midway between the neutral points as indicated by phenolphthalein and by litmus, the indicator introduced by Koch, and

with which all bacteriological research has been controlled. The medium after this addition of HCl will be slightly alkaline to litmus.

The above method of preparing nutrient broth is the old-fashioned one, and is, indeed, not so reliable as the one employed nowadays in which a good meat-extract, such as "Lemco," is used as the starting-point. Take of the extract 5 grammes, peptone 10 grammes, sodium chloride 5 grammes, water 1,000 c.c.; boil, and finish as above. The broth thus prepared may be run into specially cleaned test-tubes, about 5 c.c. into each (those reputed to be 5 inches by $\frac{5}{8}$ inch are a convenient size). These are now plugged and sterilised at 100° C. for a quarter of an hour on three successive days, or the broth may be converted into other nutrient media as follows:—

Nutrient Gelatin.—Take of the above broth 1,000 c.c., gelatin 125 grammes. Melt in steamer, and clarify by adding the white of one egg, to which a little water may have been added, render faintly alkaline, place in steamer to make quite hot, and filter in the same, leaving the portion containing the coagulated albumen, which will have sub-

sided, carefully until the last. Run the medium into tubes, using an apparatus on the plan of a gelatin-capsule filler, about 5 and 8 c.c. into each according as to whether "slopes" or "stab" preparations are required. Sterilise on three successive days.

Nutrient Agar.—This medium frequently offers some difficulties, but the following details should give satisfactory results:—Take of nutrient broth 1,000 c.c., powdered agar-agar 20 grammes (if passed through the drug-mill and made as fine as possible, considerable time and annoyance will be saved); melt in the steamer, or better in an autoclave, allow to cool slightly, or, if time is an object, cool by shaking under a stream of cold water from the tap; add white of two eggs, make just alkaline, boil in the steamer or autoclave twenty minutes, and then transfer to a tall beaker; allow to get quite cold, remove the solid mass from the beaker, and cut off the bottom of the block of jelly containing the coagulated albumen and sediment. The remainder is again thoroughly melted in the autoclave or steamer, and will then filter well (in the steamer). It may be poured into tubes, and sterilised in the autoclave for a quarter of an hour under a pressure of at least two atmospheres—or in the steamer on three successive days. Instead of cutting off the sediment on setting, it may be kept out by straining the hot liquid through butter-cloth previous to filtration.

Blood Agar.—This medium is prepared by streaking nutrient agar with blood drawn under the strictest aseptic precautions from one's own finger, or from a freshly killed animal. It may be used in the "slope" form or as plates. The great virtue of this medium is that Neisser's gonococcus grows favourably thereon, whereas it cannot be cultivated on the ordinary media—it seems to require something of the constituents of blood for its propagation.

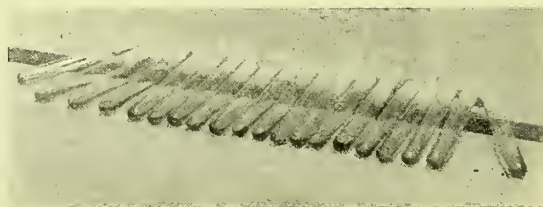
Glucose Gelatin consists of nutrient gelatin to which 1 or 2 per cent. glucose has been added after filtration. It is used for the cultivation of the anaërobic organisms and to observe gas-formation.

Glucose Agar consists of nutrient agar to which 1 or 2 per cent. glucose has been added after filtration. This medium in the upright form is used also for anaërobic work.

Glycerin Agar is nutrient agar with the addition of 6 per cent. of glycerin. Amongst its many uses may be mentioned that it is a satisfactory medium for the growth of *Bacillus diphtheria* and *B. tuberculosis* and *Strepto. actinomycosis*.

Peptone-water.—Peptone 10 grammes, sodium chloride 10 grammes, tap-water 1,000 c.c.; boil in the steamer one hour, filter, and sterilise. It is not necessary to render alkaline. A use to which this medium is put is the production of the indol reaction as one of the aids, for example, to the distinction of *B. typhosus* and *B. coli*. It was originally utilised for cholera-diagnosis.

Potato.—Large specimens are thoroughly cleaned and cut into "half-cylinders" with a potato-borer. The brown peel is removed and the pieces soaked overnight in water to wash off excess of starch. Wide test-tubes (1 inch by 6 inches) are then plugged and sterilised, and a little distilled water is placed with each half-cylinder in the tubes.



HOW CULTURE MEDIA ARE "SLOPED."

The water prevents drying up in sterilising, which latter is effected by heating on three successive days.

Milk.—The cream is skimmed from good cows' milk, and the resulting "skimmed" milk is sterilised in the steamer for half an hour on three successive days.

Blood-serum.—Separate the serum of fresh blood from jugular vein of the sheep. Filter through a sterile Chamberland filter. (The candle is heated in a muffle-furnace, or in a bright

fire, if it has been previously used for the same purpose.) The filtrate may then be poured into sterile test-tubes, plugged—and inspissated, first at 80° C., then at 60° C., and the latter temperature is maintained eight to twelve hours, or more if necessary. Finally, test after capping by incubating at 37° C. for twenty-four hours to ensure sterility.

In keeping, the old stock should be brought forward, as it often happens that fresh media will slip round the inside of the tubes. This difficulty will be overcome by allowing to mature a short time. In filling culture-media into tubes it is a luxury to use new test-tubes each time. These should be washed in diluted common hydrochloric acid and then in distilled water, but if one is forced to make use of old tubes they are freed from gelatin, grease, &c., by boiling in strong soda.

To spring from apparatus and culture-media to pathogenic organisms is like discussing the preparation of chlorine and going on to outline the aromatic series. Therefore with an apology to the non-pathogenics, including the yeasts and moulds, the colour-producing organisms, and those responsible for putrefaction, I will proceed to give terse directions for, and include some recent views on, the

EXAMINATION OF PUS, SPUTUM, URINARY DEPOSIT, AND SIMILAR SPECIMENS

for the more commonly encountered pathogenic organisms

But before doing so a few words of caution must be added. The following is necessarily considerably condensed, and it need scarcely be said that the would-be bacteriologist must attend a complete practical course of work before attempting work of this kind. My theme is that with adequate training the chemist could act as assistant to the medical man in preparing slides from the material provided by him, and then the physician would satisfy himself personally as to whether the slide contained a specific organism.

It would be very far from me to advocate that the chemist should have the entire charge of such investigations; indeed, he would much rather be without the responsibility. As soon as he has received the adequate training he will realise the very grave dangers that may arise from a false diagnosis.

Bacillus Diphtheriae (Klebs-Loeffler Bacillus).—1. Films are prepared from the specimens obtained by passing a sterile swab over the surface of membrane of fauces of the patient suspected. 2. Stain with alkaline methylene-blue or by Gram. 3. Dry, mount in Canada balsam and xylol.

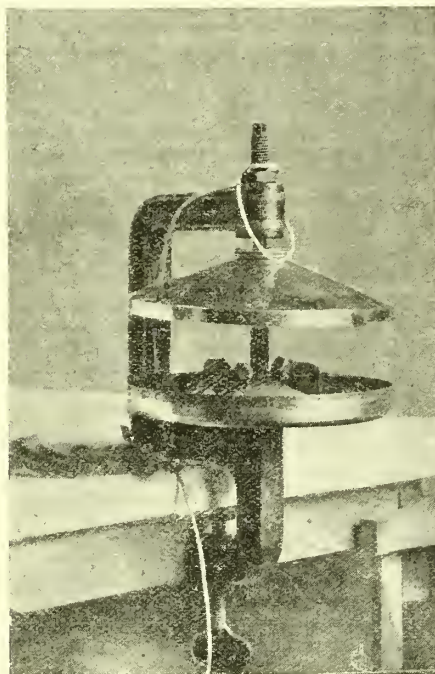
A convenient form of swab for such purposes is easily made as follows:—Procure or make some test-tubes of extra stout glass about 6 inches by $\frac{5}{8}$ inch, cleanse with diluted hydrochloric acid, wash with distilled water, and dry. The swab portion consists of German-silver wire, about $\frac{1}{16}$ inch in diameter. This is bent up at the swab end into a small loop, and cotton-wool is carefully wound on the same to make a little mop—as small as possible consistent with covering up the metal and preventing the same from scratching the patient. The other end of the wire is folded over a plug of cotton-wool, which will fit tightly into the tube. These swabs are inserted into the test-tubes, and the whole sterilised by steam-heat (not in an oven), and capped with india-rubber caps.

Recognition.—*B. diphtheriae* may be distinguished from the other organisms which will probably be seen in large numbers by the following characteristics:—Irregularity in size and outline, straight or slightly curved, more or less clubbed at one or both ends, sometimes spindle shaped, or as curved wedges, occasionally irregularly segmented, rarely or never regular in outline. Parallel grouping and “Chinese alphabet” characteristic. No threads formed, no spores, non-motile. Stain irregularly. Show polar staining with methylene blue, Neisser's method, and Gram. “Long, medium, and short forms exist. The relation between the long and short forms is not yet settled. Appears to be of clinical importance, for the virulence of the long variety is said to be greater, whilst the vitality is somewhat less, than that of the short form.” (Curtis's “Essentials of Bacteriology,” 1900.) Cultivate on blood-serum—fine cream-coloured growth in sixteen to twenty hours; film from the same stain with methylene blue or Gram. Such cultivations should in all cases be made on blood-serum or glycerin agar before the result of diagnosis can be positive.

Sections.—Stain by Eosin-Gram-Weigert method:—

1. Stain 4 or 5 min. with eosin solution.
2. Wash well in water.
3. Pass through a little alcohol.
4. Stain with aniline-gentian-violet, 10 min.
5. Cover with Gram's solution, 3 min.
6. Decolorise with aniline oil.
7. Clear with xylol and mount in Canada balsam.

There are two reputed pseudo-varieties; one described by Loeffler himself, morphologically and in all respects similar to the Klebs-Loeffler organism, but non-virulent. The other was described by Von Hoffmann shortly after the latter; it stains more regularly than the Klebs-Loeffler bacillus, and it usually showed no polar staining. “The existence of



CENTRIFUGE AND TUBES WITH POINTED ENDS FOR GETTING URINARY DEPOSITS.

pseudo-varieties is not yet satisfactorily settled, though recently the ‘pseudo’ bacilli are thought to be modified Klebs-Loeffler, though perhaps not always, as more than one species having the same morphology may exist.”—*Trans. Brit. Inst. Prevent. Med.*, First Series, 1897.

Micrococcus Gonorrhoeae.—Stain specimen with carbol-methylene blue or alkaline methylene blue.

Recognition.—The cocci usually occur in pairs, occasionally in tetrads: in groups within the cells (Foulerton). They vary somewhat in size, and are somewhat ovoid, the opposed surfaces being flattened or even concave. Not stained by Gram.

Fraenkel's Pneumococcus.—1. Prepare films from “rusty” portion of sputum. 2. Stain by Gram and counterstain with eosin half to one minute. 3. Stain other films by carbol-fuchsin. Overstain (five minutes). Slightly decolorise with weak acetic acid. (For capsule.)

Recognition.—Diplococcus (free ends are often pointed—*Diplo. lancetolatus*) sometimes occurs in short chains of four to ten cocci. Has a capsule. Stains by Gram.

Friedländer's Pneumobacillus.—Present in only small proportion of cases of pneumonia. Is not stained by Gram, but stains well by carbol-fuchsin.

Recognition.—A bacillus varying considerably in length; usually short, with rounded ends. Has a capsule.

Bacillus Tuberculosis.—Sputum and sections.—1. Prepare film from caseous particle of sputum or a section ready for staining, and fix by usual methods. 2. Boil filtered carbol-fuchsin in a test-tube, and cover specimens with it entirely;

stain films 5 mins., sections 10 mins. 3. Wash well in water. 4. Decolorise almost completely by immersing in 25 per cent. H_2SO_4 . 5. Wash well in water. 6. Counterstain with alkaline methylene blue—sputum, 1 to 2 mins.; sections, 3 to 4 mins. 7. Wash, dry, and mount in C.B. (sputum). 8. If section, clear with xylol, and mount in C.B.

Urine.—At least six films should be prepared from centrifuged sediment. Stain as for sputum, but wash after 5 above in absolute alcohol. In taking sample wash glans penis, using a clean catheter if necessary, so as to ensure not getting any Smegma bacilli—the latter resist acids when decolorising, but differ from T.B. as follows:—They are said to be slightly shorter and straighter, and also to be decolorised with absolute alcohol.

Recognition.—Delicate, straight, or more usually slightly-curved rods. When stained, usually beaded in appearance. The length of the organism is commonly said to be about one-quarter to one-half the diameter of a red blood-corpuscle, but it varies considerably. Involution and branching forms occasionally met with.

Bacillus Typhosus.—Widal's Typhoid Reaction.—Collect sample of blood on a slide in a series of droplets by pricking the lobe of the ear or the finger. Allow the sample to dry. To one drop of blood add nine loopfuls of water, normal saline, or sterile broth. Two loopfuls of this dilution are now mixed at end of slide with four loopfuls of fresh typhoid broth. Examine a loopful of this final dilution (1 in 30) as hanging drop—at once, in a quarter, half, and one hour.

Or the fresh blood of the patient suspected may be diluted 1 drop with from 10 to 30 drops (opinions differ greatly as to the dilution required) of the typhoid-broth culture twenty-four hours old, on a slide or in a watch-glass, mounted, and examined as a hanging drop.

Positive Reaction.—Complete: Clumping of organisms and cessation of movement (as a rule in under thirty minutes, or may be instantaneous). Partial Reaction: Clumping only. Negative Reaction: No alteration in one hour.

A control experiment should always be conducted with normal blood added to typhoid broth to make sure that the bacilli are actively motile and do not tend to clump on their own account. "Widal's reaction, both positive and negative, may now be claimed to be specific." (Curtis's "Essentials of Bacteriology.") For the greater simplification of Widal's reaction, Wright and Semple's sero-sedimentation tubes may be used.

These represent the macroscopic method of applying the reaction. Wright and Semple's original article in the *B.M.J.*, i. 97, 1214, should be consulted.

	<i>B. Typhosus</i>	<i>B. Coli communis</i>
Morphology ...	Well-marked rod. Length, 3 times breadth. Sometimes longer or shorter with thread (involution) forms, especially in broth cultures	Short rod. Length 2 or 3 times breadth. Often very short and ovoid. Longer individs., threads, and involution forms not so common as with <i>B. typhosus</i>
Flagella (stained by McCrorie's or Van Ermengem's method)	Long, 12 to 16 in number	Shorter, 2 to 8 in number
Motility ...	Active, right across the microscopic field	Opinions differ as to
Indol reaction ...	Does not produce indol	Well marked
Growth on potato	Translucent	Brownish
Growth in milk ...	Non-coagulation	Coagulation
Growth on glucose gelatin	No gas-formation	Gas-formation
Widal's reaction ...	Positive	Negative. Only with <i>Coli</i> serum. Cf. Gaertner's B.

Those desirous of a useful treatise on the serum-diagnosis of typhoid fever, giving as it does all the conditions and the possible causes of failure, cannot do better than consult a lecture by Dr. W. G. Savage published in the *Clinical Journal*,

May 2, 1900. He states as to the nature and causes of the reaction that the bacilli produce in the spleen and elsewhere toxins which, by their action on the tissues, particularly on the blood, cause certain changes, apparently chemical in nature, which give to the blood and certain fluids this property of causing clumping and cessation of movement when mixed with the typhoid bacilli.

Recognition.—*B. typhosus* is in many respects closely simulated by the colon bacillus. Some differences are mentioned in the table printed in the last column.

Neither of the organisms is stained by Gram. Any of the simple stains may, however, be employed.

Sections.—1. Prepare ready for staining. 2. Hot methylene blue 15 mins. 3. Wash in water. 4. Dehydrate with aniline oil. Clear with xylol 2 mins., and mount in C.B. Tissues light blue. Bacilli dark blue.

PREPARATION OF SECTIONS BEFORE STAINING.

Small pieces of the tissue to be examined for organisms may first be "fixed"—i.e., made permanent by soaking in a saturated solution of corrosive sublimate made with normal saline, or in the platino-aceto-osmic mixture of Hermann, or in one of numerous mixtures of this kind, for twelve twenty-four, or more hours, according to the size of the tissue.

They are then hardened by immersing in alcohol, passing through gradually increasing strengths—e.g., for twenty-four hours respectively in 30, 60, 90 per cent., and finally into absolute alcohol. (In urgent cases the tissue, if small, may often be transferred direct from the "fixer" to the absolute alcohol.) It is then placed in a mixture of equal parts of absolute alcohol and chloroform for twenty-four hours. From this it is removed to chloroform for four hours, thence to a mixture of paraffin (melting at 46.8° C.) and chloroform in a wide-mouthed stoppered bottle, and kept at 56° C. for four hours in an oven which can be maintained at this temperature by means of a mercury gas-regulator. The tissue is then transferred to paraffin, and kept at the same temperature for twelve to sixteen hours. It is finally poured into a little box, *secundum artem*, covered with paraffin, allowed to set, and cut with a good microtome—e.g., the one known as the "Cambridge Rocker."

Tissues are also hardened with formalin, and there are many other imbedding media—e.g., gum acacia, celloidin—but for bacteriological work the paraffin treatment is the one most recommended. The formalin and gum method is useful when the analysis is very urgent.

STAINS.

I would like to point out that the best stains are not necessarily So-and-so's at some place miles and miles away, who, as a matter of fact, may not make any at all, but they are those upon which one can rely as being the actually correct chemical compounds, checked if possible, by personal use.

PRICES.

Finally a word in regard to prices. A germic friend of mine, an enthusiast, often affirms that there is a fortune waiting for the man who can devise some method of staining, of precipitating some metallic constituent of a stain—as, for example, in Van Ermengem's method—on to the flagella of an organism whilst alive and swimming in the hanging drop. But the possibility of such great wealth accruing from work of this class is not apparent.

Bacteriology monopolises a very great deal of time, and it would appear that some members of the profession do not always realise the fact. *Verbum sapientibus.*

"WHEN COMPARED with such works as Remington, Caspari, and Coblenz, the 'Art of Dispensing' is small, but we find it is exceedingly full of meat. While intended especially for English pharmacists and those doing business under the British Pharmacopoeia, the volume will be found of real practical value to all English-reading pharmacists. A unique feature of the work is the manner in which the manuscript has been revised by ten leading pharmacists of England. We are not surprised to learn that the book is meeting with a large sale throughout the British possessions."—*Meyer Brothers' Druggist.*

Festivities.

GREAT YARMOUTH CHEMISTS' ASSOCIATION.

The second annual dinner of the members of this Association was held on March 20, Mr. H. Pechey presiding, with Mr. H. Palmer in the vice-chair. After an excellent *menu* had been discussed, the toast of "The Association" was proposed by Mr. P. R. Hill. The Chairman, in response, congratulated the members on the success of their organisation, which had proved of immense advantage both legally and commercially. Pharmacists in Yarmouth had too long kept in one narrow groove, but they now realised how advantageous it was to band themselves together and devote some time to seeking to improve their position. Legislation and organisation were the two subjects exercising the minds of all pharmacists at present, and he trusted their aim would always be to ensure the safety of the public. Another toast that was enthusiastically honoured was the health of the Secretary, Mr. H. Palmer, who made fitting acknowledgment.

NORTH STAFFS CHEMISTS' ASSOCIATION.

The annual meeting and dinner of this Association was held on March 21 at the Grand Hotel, Hanley, the President (Mr. J. Averill, J.P., Stafford) presiding. The company included Messrs. W. G. Cross, J.P., J. R. Young, J.P., T. C. Cornwell, Vice-President (Hanley), Edmund Jones, Hon. Sec., Weston Poole, Hon. Treasurer, A. Bottomley and R. T. Christopher (Hanley), T. Bentley (Shelton), G. Waddingham and A. P. Tiley (Burslem), G. Fisher and R. Prince (Longton), W. Poole, C. Morrison, D. H. Oxen, and C. Wain (Newcastle-under-Lyme), W. B. Allison (Stoke), T. H. Jenkins and F. Jacks (Stone), A. Bate (Fenton), W. Marson (Stafford), S. C. McKee (Punnett), and F. Wrench (Silverdale).

At the annual meeting, which was held previous to the dinner, the Hon. Treasurer (Mr. Weston Poole) presented a statement of accounts, showing cash in hand amounting to 47. 4s. 11d., and the Secretary (Mr. Edmund Jones) presented his annual report, after which Mr. Averill, J.P. was re-elected President, and Messrs. T. C. Cornwell and W. Oldham were elected Vice-Presidents, Mr. Edmund Jones Hon. Sec., and Mr. Weston Poole Treasurer. On the Hon. Secretary's suggestion, Mr. T. Bentley was appointed Assistant Hon. Sec.

The company afterwards adjourned to the dining-hall, where an excellent dinner was served.

The usual loyal toasts having been given, the President proposed "The Pharmaceutical Society," remarking that the proposed new Pharmacy Bill was calculated to protect both the chemist and the general public. They all hoped the Bill, as presented to Parliament, would be successful. They all knew limited-liability companies had been increasing and establishing themselves throughout the country, very much to the prejudice of the qualified chemist and druggist. They could not prevent these companies from carrying on business, but it seemed only right that in some way or other they should be regulated.

Mr. W. G. Cross, in reply, said he regarded the Pharmaceutical Society as the mother of pharmacy, without the aid of whom no pharmaceutical reform could possibly take place; he thought she deserved well of them all. (Loud applause.) No less in the provinces than in London was the Pharmaceutical Society looked up to for light and leading. Time was when the Pharmaceutical Society was considered to be a London society, the members of the Council of which were largely engaged in West-end businesses, and who cared very little for the country people. If ever they held that view, he could assure them it was changed as soon as he had anything to do with the Society. The Pharmaceutical Society to-day was representative of every interest of the chemist and druggist in all parts of the kingdom. Mr. Cross then spoke about the Pharmacy Bill, after which

Mr. J. Rymer Young said the subject of pharmaceutical politics had been fully ventilated by their trade journals, and he was not quite sure whether this ventilation was not to a large extent the reason for many of the differences of opinion which unfortunately had existed in the craft concerning their pharmaceutical politics. So far as the pharmaceutical Council was concerned, he was free to admit that the Bill now before Parliament was to all intents and pur-

poses a compromise, and he would suggest to them that any Bill which might hope for success must be based upon the principle of compromise. They would never get a Council of twenty-one gentlemen together who would be absolutely unanimous. If this Bill was to become law, the chemists of the country must present a united front. They could surely unite on the broad question of principle. The Bill offered the protection of title asked for. He might also mention that there was a general demand for a readjustment of their registration scheme. It was clear to everyone of them that the present registration scheme was distinctly defective. In the Bill, too, there was also a clause with respect to introducing at some future time a curriculum. That was altogether in the air, and was not at all intended for the present day.

After a song Mr. J. Rymer Young rose again, and proposed the toast of "The North Staffs Chemists' Association," remarking that if the Pharmaceutical Society was to keep its finger upon the pulse of the community it could only be through such societies as the North Staffs Association. The Pharmaceutical Society, he might tell them, consisted of two large sets of people—one set looked at things with a broad view, and considered the general good of the community; the other set viewed everything from their own little pettifogging standpoint.

The President and Messrs. Cornwell and McKee responded. Other toasts followed, interspersed with songs, recitations, and readings by the members.

LIVERPOOL CHEMISTS' ASSOCIATION.

The annual dinner of this Association was held at the Exchange Station Hotel on March 21. The attendance was not quite so numerous as usual, but several things accounted for this. Among those present were Mr. Harold Wyatt, jun. (President), Professor Carter, Drs. Permewan, Murray Cairns, Newham, and Carthew Davey, Dr. Symes, Messrs. Edward Evans, jun., T. F. Abraham, Edward Davies, F.C.S., E. N. Evans, J. N. Evans, A. S. Buck, H. B. Morgan, W. H. Clubb, J. J. Smith, R. Stockdale, S. W. Woolley (THE CHEMIST AND DRUGGIST), J. Humphrey (Pharmaceutical Journal), P. H. Marsden, F.C.S., H. O. Dutton, R. C. Cowley, and F. H. Wardleworth.

After the loyal toasts Mr. Edward Davies, F.C.S., proposed the toast of "The Liverpool Chemists' Association." In the course of his remarks he expressed his gratitude to the members of the Association for many years past, for the valuable assistance he had received from them in various ways, and in particular the excellence of the contributions at their general meetings.

The President, in responding, said one of the satisfactory features of the Association was the character of the papers which they were continually getting from their members. There was not too much science, and the papers as a rule were marked by the greatest common sense and took a very practical form. It was desirable that chemists should remember that in the ordinary course of their calling they had excellent opportunities of observing facts which did not appeal to the ordinary mind. The aim of the chemist should be to become an ideal pharmacist, and there was always some practical point of interest which, if properly worked out, would be for the benefit of the calling. The working of dispensing problems was a matter which frequently led to very important results, and he urged the members of the Association—in fact, all chemists—to make a point of noting and working out dispensing difficulties and contributing them to that or other associations. Before taking his seat the President paid a tribute to the valuable assistance afforded by the wholesale houses in the district by giving facilities with regard to laboratory-work, and for encouraging the contribution of such valuable papers.

Mr. T. H. Wardleworth then proposed the toast of "The Pharmaceutical Society," and in doing so remarked that for a very large number of years he had been familiar with the work of the Pharmaceutical Society, chiefly through the medium of the Englishman's privilege—namely, guabbling—but from experience he had been led to believe that, after all, the Society was indeed doing very excellent work, and would do much more if properly supported by the chemist. He would instance the recent "extension of the franchise," which was a step of very sound policy, and the appointment of secretaries in every parliamentary division must lead to

a great strengthening of the Society's influence in every district. The proposed local conferences and the draft Pharmacy Bill showed that the Society was full of vitality, and as they were told by scientists life could only come from life, he was hopeful that the spirit and influence of the present governing powers of the Pharmaceutical Society would penetrate into every town and district in the country, and in a few years, if supported loyally and thoroughly by the trade, the power of the chemist would be such as could not be counted.

Dr. Symes, in responding, said he was pleased to hear an expression of opinion like this from such an impartial observer as Mr. Wardleworth. Forty years had elapsed since he first took his seat on the Council of the Pharmaceutical Society, and he thought from his prolonged experience that the Society was not appreciated because it was misunderstood, but he had hopes that now movements which tended to bring the Society before the trade were in process the misunderstanding would gradually be removed.

Mr. J. Humphrey also replied to the toast. From all he could gather, the chemists of Liverpool were heartily sick of pharmaceutical politics, he said, and he was glad to find there was the prospect of a fairly quiet time in Liverpool that night. He was glad to find the Association was in such vigorous form after fifty-two years of successful work. Of course there were cycles of activity and rest, and this must be expected in the history of all societies. He quite appreciated the President's remarks with regard to the value of contributions, and he thought that if such dispensing notes were collated they would make a valuable adjunct to a new edition of the "Art of Dispensing."

Dr. Permewan proposed the "Trade and City of Liverpool," with which he coupled the name of Mr. Edward Evans, jun., paying that gentleman a high compliment as a hospitable and enterprising citizen of Liverpool.

In replying, Mr. Edward Evans, jun., said he was always proud to either propose or to reply to the toast. He was not at all ashamed of being reckoned a citizen of the second city of the Empire, and he considered there was something more than the mere accumulation of wealth and living at ease upon that wealth. There was a great responsibility upon all members of the community, and no one felt that responsibility more than himself; and the question of the housing of the poor, the administration of their many excellent charities, and the development of education were the main points at present to be faced by his fellow townsmen.

Mr. T. F. Abraham proposed the toast of "Medicine and Pharmacy" in a speech which emphasised the intimate relations between the two callings.

Professor Carter, in replying, said there should always be the greatest sympathy between medicine and pharmacy, and he was glad for his own part that the members of the medical profession were submitted to the dispensing criticism of the pharmacist, as in that criticism lay a very great safeguard of the well-being of the public. He exhibited the official Pharmacopœia of 1668, a small volume about half the size of Martindale's Pharmacopœia of to-day, and he said it was extraordinary to find that men in those days recognised remedies which were repulsive in the extreme, although the men who prescribed them were the highest in their profession. On looking at the Pharmacopœia of to-day one could not help feeling how large the debt of gratitude was on the part of the medical profession to the pharmacist, who had done so much toward improving the administration of medicine. He thought it was a regrettable feature that the measures and weights in the Pharmacopœia of to-day were the same as those of 1668, and he hoped the day would soon come when the weights and measures of such a book as the B.P. would correspond to those of our Continental neighbours.

Mr. A. S. Buck proposed the toast of "The Visitors," to which Mr. S. W. Woolley replied.

The musical programme rendered during the evening was a most enjoyable item of the entertainment.

THE British Consul at Tréport and Eu, Normandy, says that a fair amount of perfume and medicine bottles is exported from there, and in addition to the glass-bottle factory established some years, another has been opened within the last few months at Eu.

Scientific Progress.

New Work on Alkaloids.—*Nature* of March 21 contains an excellent review by Professor Meldola of "Die Pflanzen-Alkaloide," by Professor J. W. Brühl, of Heidelberg, and Professors Eduard Hjelt and Ossian Aschan, Helsingfors. The book is published by Friedrich Vieweg und Sohn, Brunswick, at 14m.

Preparation of Camphor from Turpentine.—According to a writer in a recent issue of the *Chemiker Zeitung*, if turpentine be deprived of every trace of water, and heated to 130° C. with anhydrous oxalic acid, a mixture of camphor and borneol is produced. The borneol can be further converted into camphor by oxidation with chromic acid. If formic acid be used borneol alone is formed.

The Emodin Content of Various Drugs.—According to Tschirch and Hiepe, the following are the percentages of emodin they have obtained from the various drugs which contain it:—Alexandrian senna, 1 per cent.; Tinnevely senna, 0.80 per cent.; Tripolitan senna, 0.86 per cent.; Mecca senna, 0.97 per cent.; Batha senna, 0.70 per cent.; resin-free senna, 0.64 per cent.; senna-pods, 1.15 per cent.; bark of *Rhamnus frangula*, 2.65 per cent.; cascara sagrada, 0.61 per cent.; rhubarb-root, 1.5 per cent.; aloë lucida, 0.8 per cent. (*Pharm. Zeit.* 1901, 117).

Estimation of Bismuth.—According to Frerichs, bismuth can be accurately determined by the following volumetric process. The solution of the salt of bismuth is freed from other heavy metals in the usual manner, and the bismuth is precipitated by sulphuretted hydrogen. The precipitated sulphide is collected on a filter, and the washed precipitate and the filter-paper are introduced into a flask marked at 100 c.c., together with a definite volume of decinormal silver nitrate in excess. To this is added 10 c.c. of dilute nitric acid, and the whole is well shaken for several minutes. The liquid is then filtered and 50 c.c. is collected, and, after adding a few drops of iron alum, the liquid is titrated with a standard solution of ammonium thiocyanate until the red colour of iron thiocyanate is apparent. From the amount of thiocyanate required to precipitate the silver salt left after the double decomposition between the sulphide of bismuth and the nitrate of silver, the amount of bismuth is easily calculated.

THE BUSINESS SIDE.

WE mentioned a few weeks ago that Mr. Sidney F. Goss, chemist and druggist, the founder of three successful West-end store pharmacies, had taken over the management of the Crown Perfumery Company. Mr. Goss is an energetic man, and we have fresh evidence of that in a scheme which he has of publishing his experience as a pharmaceutical business-man in book form. A C. & D. representative had a chat with him about the matter, and began by asking how he came to think about the book.

"Well," he replied, "I have been frequently asked for advice as to how to make the drug-business pay; also where to open and how to buy a business, and I thought I would jot down my ideas and put them in black and white once for all, instead of talking to people or writing to them."

"Is there enough for a book in your ideas?" asked our interviewer.

"Oh, yes," he replied. "See, here are the headings of the chapters," and he produced a list of a dozen or more different topics germane to the drug-business. He proceeded: "What I shall write is upon my experience in the retail business. I will point out as far as possible the best thing for young men to do in preparing themselves for the responsibility of commencing a business of their own, and the best way of running the business when they do get it. You know there is a very large number of assistants who have every intention to do well, but making nothing of their efforts. My observation tells me that they have not had the necessary chances in their career to enable them to tackle a business in a business way. They have so much to do in qualifying themselves as the law requires that really the business side of pharmacy becomes of secondary importance and is dreadfully neglected."

"So you are going to give them a sort of post-graduate commercial course, Mr. Goss," suggested our interviewer.

"If you like; but you must understand that the book will not be one giving instructions about clerical details and things of that kind. There are plenty of good books already on such matters, but there is none at all dealing with the thousand and one splendid opportunities which are open to every chemist, and which might be developed into really good things if they were taken advantage of. The issue will be limited to 100, so that those who purchase the book will have the ideas for themselves."

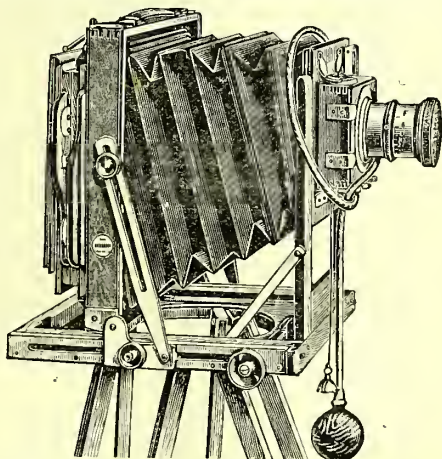
We have not seen the book nor the M.S., so that we cannot speak of its value; but Mr. Goss is a man brimful of ideas, and he has the first element to make such a book a success—namely, the courage to do it.

Photographic Notes.

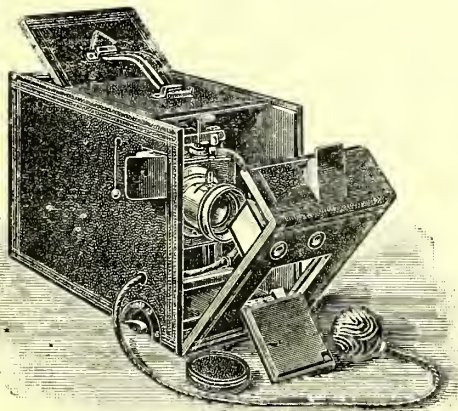
By a Pharmaceutical Camerist.

LIVERPOOL CAMERAS.

A new edition of the photographic price-list of Messrs. Evans, Sons & Co., 56 Hanover Street, Liverpool, is in the press, and will be issued in a few days. Among the novelties for the 1901 season which this firm offer are the following:—The "Pembroke" half-plate outfit, consisting of camera fitted with turntable baseboard, double dark-slide, lens with roller



shutter and tripod, retailing at 3*l.* 10*s.*, a really good line for a dealer to make a leader of. A feature of the "Pembroke" camera is the wide range which the rising front permits. In hand-cameras the newest is the "Hanover" hand-camera, which sells at 4*l.* 4*s.* This camera is beautifully finished, and can be used either as a hand or stand camera. It is



fitted with three dark-slides with aluminium shutters, and has a rising front and long extension, features which make it a hand-camera suited for serious workers. Some other patterns of hand-cameras on continental models are to be ready in a few days, and it should be remembered that the various patterns of previous years are still to the fore, the purpose of this column being only to indicate novelties. A new line which should sell well with chemists is a series of

PHOTOGRAPHIC CARTRIDGES,

for making, developing, toning, or fixing solutions. The ingredients of the developing-cartridges are kept apart by the use of a double tube, and, being hermetically sealed, keep indefinitely. Each cartridge makes $\frac{1}{2}$ pint of developer, and, although specially intended for travellers, is quite as convenient for the stay-at-home amateur. The

series of cartridges comprises all the popular developers, each selling at 4*d.*

SUPPLEMENTARY LENSES

are destined to become popular because of the convenience of being able to alter a stock lens so as to make it suitable for special purposes. Messrs. Evans, Sons & Co. are supplying a set of four supplementary lenses for converting a rectilinear lens into a telephoto, wide-angle, copying, or portrait lens. These are mounted in such a way that they are readily clipped into the hood of the lens and adapted for hoods of varying sizes. A set of four supplementary lenses for a quarter-plate lens in a case sells at 20*s.*, or separately at 5*s.*—a cheap rate, which will be an additional recommendation to the average amateur.

TRADE PRINTING.

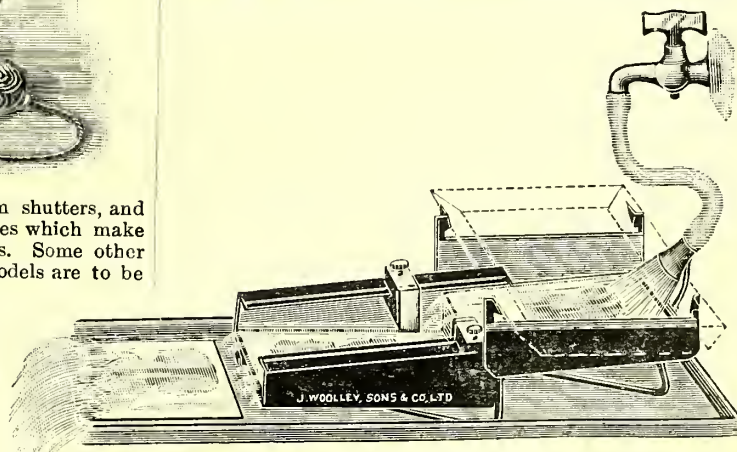
Many dealers have found out that developing and printing for amateurs are profitable lines. It is not many dealers, however, who have time to devote to this branch of the photographic trade, or sufficient volume of it to keep an assistant engaged at it. To such the convenience of being able to put the work into the hands of a trustworthy operator will be appreciated. Mr. J. Williamson, 55 Western Road, Hove, Brighton, is a chemist and druggist (Minor, 1880), who has sold his dispensing-business and established photographic works. Mr. Williamson's work has come into prominence lately on account of some excellent cinematographs of current events which he has turned out. Chemist-dealers should obtain his wholesale price-list, which will convince them that there is a good profit to be obtained from undertaking developing, printing, and enlarging for their customers with little trouble to themselves.

BICHROMATE-POISONING.

In a contribution to the *Amateur Photographer*, Dr. E. C. Fincham writes of the serious consequences which may follow to workers of the carbon-process from absorption of bichromate of potash. Skin trouble is the most frequently met with form of poisoning in photographers, the poison entering the skin through abrasions. The doctor does not suggest any remedies; but remarks that prevention is better than cure, and that it is prudent to minimise risks by wearing indiarubber gloves to prevent bichromate solution from coming into contact with the skin.

THE "VICTORIA" ROCKER

and washer, an automatic contrivance for rocking plates and prints during development or toning, or for washing plates and prints, is one of the season's novelties put forward by Messrs. James Woolley, Sons & Co. (Limited), Victoria Bridge, Manchester. The illustration explains the design of

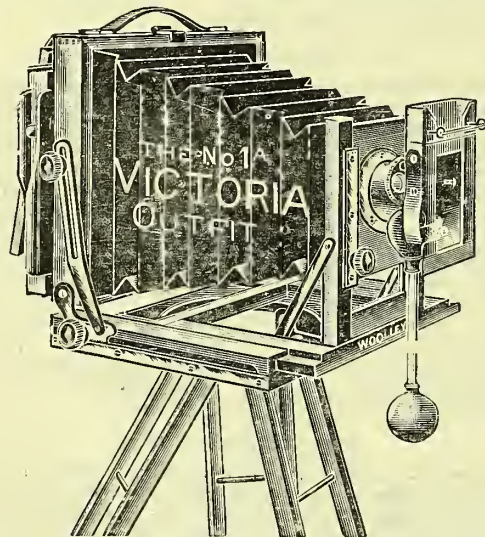


the apparatus. Two movable weights are used as counterpoises, and the flow of the water makes the see-saw motion continuous. One half-plate or two quarter-plates can be rocked at the same time, and when used as a washer four half-plates or eight quarter-plates can be dealt with simul-

taneously. The dotted outline shows the position of the dish when the apparatus is used as a rocker. The apparatus sells at 7s. 6d. The series of

"VICTORIA" CAMERAS

which Messrs. Woolley make has been further extended and existing patterns improved. A new comer to the series is the No. 1 A outfit, which we illustrate as characteristic of the "Victoria" cameras. The camera of the "1 A" set has reversing and swing back, a double dark-slide, achromatic lens fitted with drop-shutter and pneumatic release, and a two-fold tripod. The price at which this sells is only 35s., a similar quarter-plate outfit retailing at 25s. The No. 2 A



and No. 3 "Victoria" outfits represent the better qualities, and are good value for the money. In hand-cameras the No. 00 "Victoria," selling at 1l. 1s., is an attractive line, and when mentioning hand-cameras I ought to add that this firm are special wholesale agents for the "Wizard" cameras, which are familiar to readers of the *C. & D.*

BUBBLES IN LENSES.

Occasionally when such lenses as the Zeiss have bubbles in the glass it is not unusual for customers to bring the instrument back and complain. An amateur naturally thinks that after he has paid a stiff price for a lens it should be free from all defects. I lately had a customer who gave me a good deal of trouble, but he was soon quieted when I drew his attention to the following notice in Zeiss's catalogue:—

We endeavour to avoid as far as possible small bubbles and impurities in the glass, although these are, in truth, only aesthetic defects. We would, however, remark that the peculiar and very advanced optical quality of our Anastigmats necessitate in their manufacture the use of glasses possessing properties which formerly were not available. Some of these glasses are required to have a very high refractive power and yet a low dispersion; others, again, are required to combine a high dispersion with low refractive power. The production of glasses possessing such exceptional properties involves extraordinary technical difficulties, and it is all but impossible to entirely exclude the presence of small bubbles. As every practical optician knows, defects of this kind do not affect the quality of the lenses, the only effect produced by their presence being an inappreciably small loss of light, which even in the most unfavourable cases does not exceed $\frac{1}{10}$ per cent. Since it does not lie in our power to obviate these defects we cannot regard their presence as a sufficient cause for complaint. We must, in fact, announce our inability to satisfy the requirements of those who insist on this utterly unimportant feature.

DARK-ROOMS.

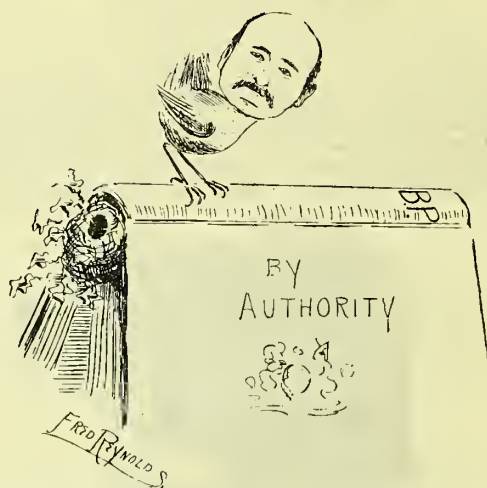
Messrs. Curtis & Co., druggists, 95 Barrack Street, Waterford.

Mr. G. R. Hankinson, chemist, High Street, Uxtoxeter.

Mr. W. Lyle, chemist, Rothesay, N.B.

Messrs. Richardson & Son, chemists, Yarmouth, and Freshwater Bay, Isle of Wight, have fitted up dark-rooms.

Pharmaceutical Fauna.



Parus Britannicus var. *Methylmorphinus*.

"A great frequenter of meetings, and a general devourer. It will also pick holes in articles."—White's *Unnatural History of Belladonna*.

On the red-coloured Book sat a critical Dott,
Singing "Fetish, his fetish, their fetish";
And I said, "Now, D.B., you will make Edmund hot
And quite pettish, so pettish, quite pettish.
For you know to the uppermost cult he belongs,
And *It* wouldn't touch a Provincial with tongs,
So the ext. belladonnæ (to shield B.P. wrongs)
Must be wettish, still wettish, quite wettish."

But the other birds chirped, and the Terrier smiled,
Singing "Ready, I'm ready, quite ready";
And the Stalwarts, with eager demeanour and mild,
Whispered "Steady, be steady, go steady."
But the Warrior of Watford his Notes lightly conned,
And as Edmund the Champion uprose to respond,
Shouted, "Dare he dispute with a B.Sc. Lond.?
Go it Eddie, our Eddie, poor Eddie."

NOTE.—We have not ventured to spoil the poetry, but it is not strictly descriptive of the latest addition to the Fauna, which was caught in Edinburgh last week in the posture indicated.

New Books.

Any book named in this list can be supplied post-free to any part of the world on receipt of the published price by the Publisher of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Cordingley, W. R. *Guide to Stock Exchange*. 2nd ed. $6\frac{1}{4} \times 4\frac{3}{4}$. Pp. 130. 2s. net. (Eppingham Wilson.)

Hopkins, A. A. *Scientific American Cyclopædia, or Receipts, Notes, and Queries*. 9×6 . Pp. 740. 25s. net. (Low.)

Hyatt-Woold, C. *What to Eat and Drink*. $8\frac{3}{8} \times 5\frac{3}{8}$. Pp. 156. 1s. (Gutenberg Press.)

Sadler, S. P. *Handbook of Industrial Organic Chemistry*. 3rd ed. $9\frac{1}{2} \times 6$. Pp. 548. 25s. net. (Lippincott.)

Schuster, A., and Lees, C. H. *Advanced Exercises in Practical Physics*. $9 \times 5\frac{1}{2}$. Pp. 378. 8s. (C. J. Clay.)

Shenstone, W. A. *Laboratory Companion for use with Shenstone's "Inorganic Chemistry"*. $7\frac{1}{2} \times 4\frac{1}{2}$. Pp. 126. 1s. 6d. (E. Arnold.)

Thompson, S. P. *Michael Faraday: his Life and Work*. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 320. 2s. 6d. (Cassell.)

Warwick, F. J., and Tunstall, A. G. *First Aid to the Injured and Sick*. $6\frac{3}{8} \times 4$. Pp. 228. Illus. 2s. 6d. (Wright & Co.)

Observations and Reflections.

By XRAYSER.

MR. PATERSON'S PROSPECTS of upsetting the Pharmaceutical Council election procedure are seriously compromised by the able historical review of the legislation affecting it in last *C. & D.* (page 479). Mr. Paterson has shown a singular mastery of the subject, and he may be able to dispose of the series of circumstances marshalled against him. These, it is evident, do not perfectly cohere. As suggested in the article itself there has been no express repudiation of the specific instructions as to nomination and appointment of Council set forth in the Charter. Nor is it clear why in the several statutes only the election of "officers" of the Society is dealt with, and the election of members of Council is not mentioned. If the framers of these Acts meant the members of the Council, as evidently they did, why should they have been so reluctant to mention them? But the accumulative effect of the facts narrated is, I must confess, too strong for me, and is a wet blanket for those who were anticipating a new sensation at the next annual meeting of the Pharmaceutical Society.

THE WESTERN CHEMISTS OF LONDON are rather a *doctrinaire* body of gentlemen when they assemble for discussion, and I have generally noticed that they are able to consider questions which come before them without being prejudiced by their own circumstances. But in dealing with Lord Avebury's Early Closing Bill they hardly showed this characteristic. Everybody knows that the tradesmen in the London suburbs would be about the last people to adopt the optional scheme if it were enacted. Late evening trade with them is a tradition, perhaps a necessity, often, I fancy, a luxury. Well, no one wants to interfere with their peculiar pleasures. In such cases the necessary majority would not be obtained. But there are hundreds of places besides London, and in many of these there is neither the necessity nor the desire to keep the gas blazing for hours after the intelligent portion of the population have finished their day's work. All that is asked is that the general wish shall not be frustrated by the greediness or the whims of an insignificant minority.

LORD AVEBURY attended the annual banquet of the National Association of Grocers' Assistants last week, and told the assistants that "there had never been any slaves in the history of the world who had worked such long hours as the small shopkeepers and the assistants had to work at the present time." "He was thoroughly convinced that nothing would contribute more to lighten and brighten the lives of thousands than something which would cure the cruel evil of the long hours of labour in shops." Urged by this conviction, Lord Avebury has devoted untiring efforts to this cause; he has advocated it in almost every great city in the country, and he said at the dinner he had been charged with fathering ten Bills on the subject, and he was afraid that charge was true. Before carelessly dismissing the proposal as one of insignificance, or as a dangerous innovation, the highest class of tradesmen, who perhaps are not personally concerned, might consider Lord Avebury's example, and see whether they cannot help to "lighten and brighten" these many thousands of lives.

MR. REID upbraids me for agreeing with Mr. Lord Gifford on the question of "fundamentals." I may at least plead in extenuation that our agreement does not reach further.

Mr. Gifford contends—and a great many people, my humble self included, agree with him—that in seeking new legislation we should insist on the maintenance of the principle of the Pharmacy Act of 1868. This has always been the basis of the *C. & D.* arguments. But the moment we have agreed on this condition Mr. Gifford wanders off into obscurity. How he would legislate he has never yet told us, and I have no idea. So far as I can see Clause 7 of the Council's Bill fulfils the stipulation laid down, and should satisfy the most exacting among us. It demands that the persons in a company who actually keep the open shop for the sale of poisons—the persons, that is, who direct the business—shall be qualified. If we get that, what more can we reasonably claim? The unqualified, incorporeal, mystic "entity," the abstract company we have heard so much about, is a mere legal phantom which need not concern us, and outside shareholders who simply lend the money to the business have far less influence over it than the ordinary chemist's unqualified wife has over his. The person who actually sells the poison is already looked after. What more can Mr. Gifford want, and why does he describe this proposal as a surrender of principle?

SIR JOHN BLUNDELL MAPLE, M.P., President of the Voluntary Early-closing Association, appeared before the Select Committee on Monday. He had no dry facts to present, had not even a report of his Association to submit, and he objected to give his evidence in the ordinary way by answering questions. But he was lavish with his criticisms, his opinions, and his advice. "I am a retail tradesman, myself, and I am proud of it," said the prospective peer to their Lordships. But he took care to impress upon the Committee that his company employed some 6,000 persons, and had nearly that number of shareholders. He closed at 7, so did his neighbours Shoobreds', so did Marshall & Snelgrove, and all the other great houses. But were they to dictate to all the little shopkeepers round London what time they were to close? Far be it from him to wish to deprive poor widows and struggling shopkeepers of their livelihood. If the smaller shops are all closed, too, how were his employes and those of other large firms to do their shopping when they got home at night?

ONE VERY INTERESTING POINT was raised in the course of Sir Blundell's evidence, or, rather, lecture. He was insisting that Parliament had not hitherto interfered with grown-up shop-assistants, and was quoting the Bank Holidays Act when Lord Avebury reminded him that Section 3 of that Act provided that "No person—it does not say no bank clerk, explained the author of the Act—shall be compelled to do anything which he is not liable to do on Christmas Day or Good Friday." Sir Blundell, however, would not accept that. He read the title of the Act, the preamble, and some of the other sections to show that the contest all referred to the postponement of the payment of bills of exchange or other obligations, and he certainly made a strong case. "Well, I drew the Bill, but it is not a matter of great importance," plaintively remarked Lord Avebury.

THE CHEMISTS' DEFENCE ASSOCIATION scored heavily last week. It was really a great feat to win two such events as the magnesia-ponderosa case at Lambeth and the mercury-oointment case at Canterbury. Both would inevitably have gone against the chemists if they had not been cleverly defended. Some of us may doubt whether in the first a small fine would not have been the pharmaceutically correct conclusion for oxide of magnesia which had absorbed sufficient carbonic acid from the atmosphere to convert 30 per cent. of it into carbonate must have been long enough in shop-service to have earned its discharge. But in the mercury-oointment prosecution the C.D.A. managed to convey to a bench of county magistrates the general trade view so effectively as to induce them to give a judgment contrary to that only recently recorded by a Queen's Bench Divisional Court. This was, as I have said, a notable achievement; but unfortunately the judgment of the higher Court remains as the ruling one.

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Editorial Comments.

Sugaring the Revenue.

OUR national financial year closes to-day in an exceptionally dense cloud of uncertainty, and there is little doubt that the trade of the country is suffering considerably in consequence of fears concerning the forthcoming Budget. It is at such times as this that people put the drags on the industrial machine and the commercial coach, although there may be, and in many cases is not, the slightest reason for it. The enormously increased expenditure which the Chancellor of the Exchequer has this year to provide for has given rise to all sorts of rumours as to the taxation of commodities, and some of them come within the purview of our business—for example, sugar and temperance-beverages. This kind of prophesying strikes us as somewhat out of date. The temper of the country is out of harmony with the taxation of commodities, and especially is it opposed to

anything in the nature of protection tariffs, for the industrial freedom which has followed the establishment of free trade has brought with it such increase in our commercial prosperity and social comforts that no Government will venture to jeopardise these beneficial conditions for the sake of exceptional and transient requirements in national revenue. If the ordinary revenue were obtained chiefly from the taxation of imported articles, the addition of such a huge staple as sugar to the list would cause little difficulty; but our revenue-collecting machinery is in the main internal, so that any large extension of Customs duties would mean a formidable augmentation of the Customs staff and bonded warehouses. These things cannot be created in the day that elapses between the proposal of new taxation of this kind and its enforcement, and, after all, a duty on sugar would be practically equivalent to increasing the duties on tea, coffee, and cocoa with which most of the sugar is consumed, while the cost of collecting the revenue would not be increased. It has been estimated that it would cost the country two millions to collect a duty on sugar, however small or large it might be; the estimate may be exaggerated, but we cannot overlook the fact that the sugar-taxes in Germany and France have not benefited the national exchequers so greatly as they have the comparatively few sugar-manufacturers. Consumers pay in Germany about double the price for sugar that we do, and in France at present people pay 6*d.* a pound for sugar which is actually sold in this country at 2*d.* to 2½*d.* Only a fraction of the difference goes into the national exchequers, and thus the consumers are robbed under the guise of taxation. Perhaps a sugar-duty in this country would not have such calamitous consequences, but the ramifications of the duty are almost too great to contemplate. One has only to think of the variety of saccharine products which we import in order to realise the incidence of the tax, and the work which would be created by constant inspection of imported articles. From crystallised fruits and preserved ginger to tamarinds and Fellows's syrup there is a saccharine field for fiscal energy far out of proportion to the revenue that is likely to be obtained from it; yet it must be reckoned with if a sugar-tax is imposed. Indeed, the contemplation would be ridiculous were it not for the fact that enormous quantities of sugar have recently been removed from what are supposed to be the dutiable regions, and thus some colour of reality is given to the current prophecy. We deal with the subject because it directly affects the interests of the drug-trade, in which there are scores of articles whose values would in some degree be altered if the prophecy were realised, and that our readers may figure up the matter for themselves in anticipation.

Patents Reform.

THE report of the Committee appointed by the President of the Board of Trade to inquire into the working of the Patents Acts in certain aspects has been published by the King's printers. The chief question which the Committee had to consider was as to controlling, imposing conditions on, or otherwise limiting the issue of letters patent in respect of inventions which are obviously old, or which have been previously protected. The first fact elicited by the Committee was that since 1877 57·95 per cent. of the patents actually issued in this country had not been anticipated, while 6·96 per cent. had been wholly covered by previous patents, 35·31 per cent. partially covered, 0·29 per cent. were obviously old, and the balance of 0·12 per cent. consisted of specifications in which no method of manufacture was

given. The Committee have come to the conclusion that the Patent Office should, when the specification is deposited, make an examination of existing patents for a period of fifty years back to see whether an invention is or is not planned or described in any of them, and they recommend that a fee of 1*l.* be authorised in respect of this examination. Another question was as to the working of the provisions of Section 22 of the 1883 Act, which is in the following terms:—

22. If on the petition of any person interested it is proved to the Board of Trade that by reason of the default of a patentee to grant licences on reasonable terms—

(a) The patent is not being worked in the United Kingdom, or

(b) The reasonable requirements of the public with respect to the invention cannot be supplied, or

(c) Any person is prevented from working or using to the best advantage an invention of which he is possessed,

the Board may order the patentee to grant licences on such terms as to the amount of royalties, security for payment, or otherwise as the Board, having regard to the nature of the invention and the circumstances of the case, may deem just, and any such order may be enforced by mandamus.

The Committee suggest that the section should be repealed, and that legislation be undertaken with the view to lessening legal disputes between parties in respect to the validity of patents. The Committee farther recommend that the period of seven months' priority allowed to applicants under the International Convention may be extended to twelve months with certain reservations. There are a good many dissensions from the report, but it is understood that the Committee's labours will be followed by legislation, although Mr. Gerald Balfour will not bind himself to that.

Russia as a Competitor.

HITHERTO the Muscovite has not been looked upon as a serious competitor for commercial supremacy amongst the leading nations of the world. America and Germany are Great Britain's most closely regarded rivals. The kinship which we claim with our Transatlantic cousins has somewhat softened the acerbity of our struggle with them, and during the past decade we have kept our eye on Germany as the opponent whose influence is most to be feared. Books have been written, consular sermons preached, and Tenter methods held up as models to be followed by the British business man, whose long tenure of top place in commerce may have tended to make him somewhat self-complacent and contemptuous of rivalry. But while we have had our hands full elsewhere, other nations, like Japan and Russia, have quietly but surely been making headway, so much so that both will probably have to be reckoned with in the future. That Russia is showing signs of making a bid for a slice of the world's commerce cannot be gainsaid. The fine display made by that country in the various industrial sections at the Paris Exhibition last year was freely commented upon at the time, and the fact that, next to Great Britain, Russia will be the largest exhibitor at the Glasgow Exhibition of this year show that business is meant. In those regions of industry with which we are more particularly interested recent events indicate that Russia is by no means behind. The Russian Section of Chemical Industries at the Paris Exhibition was next in importance to those of Germany and Great Britain amongst foreign nations, while in a crucial commerce great steps have been made during the past few years in such industries as soap-making, oil-refining, the manufacture of stearin, and the distillation and refining of petroleum products. Although soap-making has not attained so great a development in Russia as in Britain, France, or America, it has of late years gone ahead. The official statistics for the year 1897 (the latest available to us) show the existence in Russia of 558 soap factories employing 2,654

workmen, and producing 71,648,000 kilograms of soap. The largest soap factory appears to be that of Mr. A. M. Shukoff, in St Petersburg, which was founded in 1865, and whose annual output is 8,000,000 kilograms. Business in oleaginous seeds and oils is one of the most flourishing in all Russia. The exportation of seeds diminishes yearly, and the national oil-refining attains correspondingly greater dimensions. In Russian oil-refining indigenous grains are now almost exclusively used, and a great proportion of the oil-cake products of the world are exported from that country. In 1897 the number of oil-refineries in operation was 647. The quantities of the different oils produced in that year, as revealed in the statistics, show that substantial progress had been made in the previous two years. Linseed oil is, of course, the principal production, and in 1897 it stood at 33,855,000 kilograms, and smaller quantities of coconut, hemp, castor, colza, mustard, sesame, and other oils prove the diversity of the production. Cocoa-nut oil is the only concrete oil produced in any quantity; it is used by soap-makers, and also in the preparation of heating and lighting oils. Castor oil is made entirely from imported seed, and is employed in colour-making and in the preparation of lamp oils for religious rites. In the preparation of stearin in Russia, animal fat can only be used, as there is a high import-duty on foreign fats. This abnormal situation is partly balanced by the high price of oleic acid in Russia, and by the prohibitive tariffs imposed on the import of foreign stearins. There were eleven stearin manufactories in the country in 1897, and the production in that year of stearin and candles was put at 21,312,000 kilograms, oleic acid 9,248,000 kilograms, and glycerin 2,816,000 kilograms. The discovery of petroleum at Baku has given Russia a new industry—the distillation of petroleum—and apart from large exports of burning-oils, a growing business is done in lubricating-oils, petroleum jelly, and other by-products. The chemical industries of Russia are not of external importance, still alkali-manufacture is steadily increasing, so that within the present generation the needs of the Empire in that respect may be met, and thus another market for British alkali will be wiped out.

The Science of Pick-me-ups.

THE last issue of *Nature* contains an interesting abstract of a paper by Sir Lauder Brunton and Dr. Tunnicliffe on "Certain Apparently Injurious Constituents of Spirits." The authors have tried experiments on animals with whisky, which differs little in chemical composition, whether old or new, so far as analysis can reveal, but the physiological difference is great, as many who read this have doubtless realised. Sir Lauder Brunton and Dr. Tunnicliffe state that new whisky contains furfural amongst other aldehydes, and their experiments proved that these aldehydes produce the throbbing headache which follows too free indulgence in improperly matured whisky. One of the effects of maturation is to diminish the amount of furfural and aldehydes which it contains. The same effect is brought about by distillation of the fresh spirit or of the low wines with phenylhydrazine-sulphonate. By this means the authors obtained an aldehyde-free whisky, which did not produce, like the ordinary spirit, the grosser symptoms of alcoholic poisoning approaching to mania, nor such secondary symptoms as bad temper and refusal of food offered. These symptoms in the animals which had the bad spirits were relieved by substances which contain chemical groups capable of combining with and rendering innocuous these same aldehydes. The most general substance used in this connection is either ammonia itself or some compound containing amido (NH_2) groups. The action of all morning "pick-me-ups," from

the student's red-herring to the viveur's effervescing citrate of caffeine, is apparently explainable upon this hypothesis—viz., that they neutralise the aldehyde constituents of the potable spirits. That being so, the dose of sal volatile should not, we may say, be delayed until next morning. While dealing with the effects of alcohol, we may mention here appropriately a speech by the Archbishop of Canterbury at the annual meeting of the London Temperance Hospital last week. In the course of his speech he said:—"The medical profession had not believed in the temperance movement at one time at all. But now they admitted that alcohol is, as a general rule, of no use whatever to the human body, and that we are more likely to retain health by abstaining from it entirely. He looked upon himself as a good example of total abstinence. He is close upon 80, and he did not think they would find many men of 80 who would be able to do such work as he did. He did not profess that if he were in the hands of a physician, and if he ordered alcohol, he would refuse to take it. If he did not trust his physician he would go to another; but physicians are different now from what they were. If the patient now says he is a total abstainer, the physician generally accommodates himself to the position, and permits him to remain a total abstainer. The London Temperance Hospital is one of the means that had brought about that change."

CARDAMOM ASH.

There were a few points in our abstract of Messrs. Cowley and Catford's paper printed last week for which they were not responsible. They did not say that the phosphorus exists in seed or tincture as phosphate, but rather imply that it will be found to be otherwise. They described the ash as "dark-coloured residue," not "black ash." Dr. Grew's yield of ash from rhubarb was 25 per cent. of the drug ($\frac{1}{3}$ oz. from 2 oz.), not "25 per cent. more than any other root."

EARLY CLOSING.

The majority of local associations to which we sent a circular letter and series of questions in respect to Lord Avebury's Shops (Early-Closing) Bill have responded, but the secretaries of a few associations have asked a little further time to reply, as the matter is being made the subject of discussion in open meetings. Without anticipating the final result we may state that out of fifty associations that have so far replied, only two do not agree that the early closing of shops by statute is desirable, and these are the Western Chemists' Association of London, and the Chemists' Assistants' Association, also of London. In the latter case the opinion sent in is that of the Council only, as the matter could not be brought before a meeting of the members. We shall give later a complete analysis of the voting on the six questions.

PROPRIETARY PROFITS.

From the ranks of grocery comes a wail on the subject of profitless proprietaries. A writer to the *Grocer*—quoting the price-list of Condy & Mitchell as follows—

Condy's fluid, sixpenny bottles, 5s.; one shilling size, 10s. . . . Sole discount, 5 per cent. on 5l. parcels, cash with order.

remarks that five pounds' worth of that article would mean twelve months' stock to most country grocers, who must retail it at $5\frac{1}{2}\text{d.}$ and $10\frac{1}{2}\text{d.}$ per bottle "to meet London store competition." The guileless scribe thinks it time that a list was compiled of the many proprietary articles the grocer is distributing at his own expense, "the manufacturer taking the cream," and another list "of the substitutes of equal value," which pay the grocer a living profit for his trouble. Evidently an ironical fate has brought about the undoing of a class of traders which is more responsible, perhaps, than any other for the cutting of medical proprietaries. Why not stick

to the grocery business and leave medical proprietaries severely alone?

ECCLESIASTICAL AMENITIES.

A pretty quarrel is engaging the attention of St. Michael's Church, Coventry, in which two prominent local pharmacists appear as the principal belligerents. The Vestry, through Mr. J. W. Axford, chemist and druggist, one of its members, has intimated to Mr. Jas. Hinds, pharmaceutical chemist, a desire to dispossess him of the sittings usually occupied by Mr. Hinds and his family. To this Mr. Hinds strenuously objects, and while disclaiming any illwill towards Mr. Axford, he pointedly refers to "the Parasites and Semi-Parasites attached to a closed vestry during the last forty-five years, which have made St. Michael's Church a stain throughout the land," and defies the Vestry to dispossess him. The correspondence between parties on the subject has been published in a local paper, and as Mr. Hinds is evidently prepared to fight the matter, an interesting *dénouement* is awaited. As far as can be judged, the dispossession has the appearance of a high-handed and scarcely justifiable procedure.

THE B. OF T.

It appears that the "Board of Trade" includes in its *personnel* the Lord Archbishop of Canterbury, the First Lords of the Treasury and the Admiralty, the Secretary of State, the Speaker, the Chancellor of the Duchy of Lancaster, and the Paymaster-General. Mr. Gerald Balfour has stated that it is not customary to summon a meeting of all these members, but when the Board meets *one is a quorum*. This has worked upon a poetic contributor's prophetic vision as follows:—

The Mincing Lane broker, on business intent,
Leaves sentiment solely to mystics;
He likes institutions commercial in bent,
And revels in drugs and statistics.
So sends deputations our Statesmen to probe
On *Glycyrrhiza var. Glabra*,
And kicks, if 'tis sought, import-figures to rob,
Of scarce *Richardsonia scabra*.

Then swiftly to Whitehall the broke man sends
His wisest and keenest debaters;
The Board gracious audience freely extends—
And there sits an Archbishop in gaiters!
The merchants are troubled, their ardour doth fade:
They think getting out would be wiser.
Then the spokesman, "Your pardon, we seek Board of Trade."
Saith his Lordship, "Quite right; that is I, sir."

PHARMACEUTICAL EDUCATION IN CHICAGO.

The present generation of British pharmacists is probably not aware that peculiar interest attaches to the Chicago College of Pharmacy on account of the fact that when Chicago was burned to the ground some years ago the College perished in the flames. Largely owing to the efforts of Dr. John Attfield, a substantial sum of money was collected in this country for the re-erection of the College, and the Attfield Hall exists to this day as the concrete expression of Chicago's thanks for British generosity. The College has not been in a very happy condition during the past decade. A dozen years ago there was a split from it when Professor Oldberg founded a School of Pharmacy in connection with the North-Western University. Following this the original College became affiliated to the University of Illinois, but it appears that the union is of little practical benefit to the College, and now we hear that considerable friction is going on although a distance of 100 miles separates the College from the University. Indeed, it is stated in regard to the old and new colleges that the universities do not treat them too well, and are rather inclined to patronise the pharmaceutical element, which, even in the city that discovered the highest expression of professional development in a tenth or twelfth floor pharmacy, is still associated with trade, and as such is not exactly on a footing with medicine, arts, and science. What nonsense such narrowness is!

Pharmaceutical Society of Great Britain.

LOCAL MEETING.

A MEETING of divisional secretaries and chemists of the West Riding of Yorkshire was held in the Philosophical Hall, Leeds, on March 27. Sixty attended. The object of the meeting was to discuss the new draft Pharmacy Bill "and matters of importance to the pharmaceutical calling."

Mr. F. W. Branson (Reynolds & Branson), of Leeds, was in the chair, and among those present were Ald. J. Harrison (Sunderland), Mr. C. B. Allen (London), Mr. J. H. Chaplin (Wakefield), Mr. F. C. Long, Mr. W. O. Pollitt, Mr. F. P. Sergeant, Mr. S. Taylor, Mr. G. Jackson, Mr. R. Fred Reynolds, and Mr. E. Yewdall (Leeds), Mr. T. E. Handford (Harrogate), Mr. C. W. Worfolk (Ilkley), and Mr. R. Bremridge.

Mr. C. B. ALLEN explained the main features of the Bill, which, he said, contained a good many provisions which would be for the benefit of the craft at large. The Bill would probably not meet with the sympathy and support of every one practising pharmacy in the kingdom, but it was introduced as a perfectly practical measure, and which, while it gave certain privileges to the pharmacist, secured the public safety.

Alderman J. HARRISON stated the Bill had been fairly well received by the chemists and druggists of Great Britain. There had been some exceptions. Some said it went too far; others that it did not go far enough. To his mind that was the strongest indication that the position taken up by the Council was a *via media* that ought to lead to success. There was no doubt that the great fight would centre round the companies question. Touching on the question of title, Alderman Harrison said that when John Smith constituted himself John Smith (Limited) he had no right to confer the title upon all his *confirères*. With regard to the registration of shops, he mentioned that in the county of Durham the practice had sprung up of hawking medicines from door to door in the mining villages, adding that a good many registered chemists and druggists were doing it. If poisons were to be banded about in this way they might as well put the Pharmacy Act in the fire.

Several questions having been asked and answered, Mr. SQUIRE, of Sheffield, proposed a resolution that the meeting approve of the Bill, which was seconded by Mr. WADDINGTON, and carried.

Personalities.

Mr. J. YOUNG, chemist and druggist, has been elected a director of the Torquay Gas Company.

LIEUTENANT-COLONEL CLIFFORD PROBYN was on March 21 installed in the office of Master of the Patten-makers' Company.

MISS ELIZABETH McELVEY, M.B. and Ch.B. (Edin), has been appointed house-surgeon and dispenser at Tiverton Infirmary.

DR. S. B. SCHRYVER, F.I.C., F.C.S., formerly of the Wellcome Chemical Research Laboratories, is now to devote himself entirely to private practice in London as a consulting chemist.

MR. E. A. WEBB (Messrs. Evans, Lescher & Webb) has given the public a further taste of his intimate knowledge of church architecture in "A Guide to the Churches of Chislehurst," which has just been published by Mr. George Allen.

MR. F. L. SEELY, secretary of the Paris Medicine Company, St. Louis and London, recently arrived in Ceylon. Mr. Seely had travelled from America *via* Java, where he had spent a month at the Government cinchona plantations. According to the *Ceylon Observer*, Mr. Seely is travelling in the East "to gain some idea of the quantity of quinine likely to be forthcoming in the future, as the company purchases an immense quantity annually."

Winter Session.

Notices of meetings to be held are inserted under "Coming Events." If meetings are not attended by reporters, secretaries of associations would oblige by communicating with the Editor.

Chemists' Assistants' Association.

At the meeting on March 21 there was only a fair attendance, about fourteen members being present, when Mr. J. A. DEWHIRST (President) opened the proceedings by introducing Mr. W. A. H. NAYLOR, F.I.C., F.C.S., to read his paper on

OLEATES: OFFICIAL AND UNOFFICIAL.

The oleates, he said, excepting zinc and mercury, are not largely prescribed, and consequently the majority of pharmacists have only a limited acquaintance with them. For the most part the published literature on the subject, although far from meagre, is not of a kind likely to be needed behind the dispensing-counter. Useful references are to be found in the Extra Pharmacopœia, whilst formulæ, accompanied by practical hints and chemical notes, suitably find a place in "Pharmaceutical Formulas." My twofold reason for submitting the following notes is because I think they supply the answers to questions which have been addressed to me, and they also give working formulæ for the oleates from material found in every pharmacy, and without the trouble of having first of all to prepare a soda soap direct from oleic acid. The results recorded have been obtained by taking the quantities in the subjoined formulæ. Pharmacists working on the small scale may therefore expect to get like products both in respect of physical character and yield. The soap used was a genuine olive-oil soap of high quality, and contained 15 per cent. of water.

Aluminium Oleate.—One ounce pure potassium alum is dissolved in 6 fl. oz. of boiling water, and poured with stirring into a solution consisting of 2 oz. of soap dissolved in $\frac{1}{2}$ pint of boiling water. The precipitate, which is clotty, is washed with boiling water by decantation until free from sulphates, and dried over a water-bath. The oleate is of a yellowish grey colour, opaque, adhesive, and weighs about $2\frac{1}{2}$ oz. On ignition it yields 6 per cent. of oxide, equivalent to 3.2 per cent. aluminium. If it is desired to obtain the oleate in an anhydrous condition, exposure to a temperature of 120° C. is necessary. For making the ointment it is sufficient to take the oleate as dried on a water-bath.

Bismuth Oleate.—A process that can be conveniently worked and that yields a satisfactory product is the following:—One ounce of bismuth subnitrate is dissolved by the aid of heat in $5\frac{1}{2}$ fl. dr. of nitric acid, diluted with its own volume of distilled water. It is then further diluted with three times its volume of distilled water, and poured, while hot, with stirring, into a hot solution consisting of 3 oz. of soap in 24 oz. of water. The precipitate is washed with hot water by decantation, and dried over a water-bath. The yield of the dried oleate, which is of a light-citron colour, is about 3 oz. On ignition it yields bismuth oxide 22 per cent., equivalent to 20 per cent. metallic bismuth.

Copper Oleate.—One ounce of pure crystallised copper sulphate is dissolved in 5 fl. oz. of water, and poured, with stirring, into a solution consisting of $2\frac{3}{4}$ oz. of soap in 1 pint of water, and the mixture heated to boiling. The resulting precipitate, which at first is flocculent, gradually aggregates, and if the heat be maintained it separates, but in a short time, in the form of a plaster. When completely washed, kneaded, and dried over the water-bath it is of a dark-green colour, somewhat opaque, toughly brittle, and weighs $2\frac{1}{2}$ oz. It yields on ignition 11.6 per cent. of oxide, the equivalent of 9.3 per cent. of metallic copper.

Ferrous Oleate.—This oleate partakes of the instability which characterises many ferrous salts. The water used, whether as a solvent or for washing purposes, should be freed from dissolved oxygen by prolonged boiling; precipitation should be effected in a vessel that can be stoppered, and of a size not larger than suffices to contain both the precipitate and liquid. Moreover, the whole process should be carried out with all possible speed. To expedite the later stages of the processes the precipitated oleate, when sufficiently washed, should be thrown on calico, squeezed, and then subjected to strong pressure. The pressed cake in its unbroken state should be dried at a temperature not exceeding 50° C. For the production of the oleate the proportions of pure crystallised ferrous sulphate and hard soap are—1 oz. of the former, dissolved in 5 fl. oz. of water, and 2 oz.

of the latter, dissolved in 16 fl. oz. of water. In spite of these precautions, the oleate will be found to have undergone considerable oxidation.

Ferric Oleate.—This can be easily and quickly prepared through the interaction of ferric acetate and hard soap. Suitable proportions are 4 fl. oz. of solution of acetate of iron (B.P. 1885) and $2\frac{1}{2}$ oz. of soap dissolved in 16 fl. oz. of boiling water. The washed precipitate (previously washed with hot water), when dried on a water-bath, is of a deep-red colour, and weighs a little over 2 oz. On ignition it yields 8 per cent. Fe_2O_3 , equivalent to 5.6 per cent. of metallic iron. It is readily soluble in the fixed oils. Advantage may be taken of this fact when it is required to administer cod-liver oil in association with iron.

Lead Oleate.—The following process is that of the "National Formulary":—Dissolve 3 oz. of lead acetate in 160 fl. oz. of water, and clear the solution by the addition of a few drops of acetic acid. Dissolve 5 oz. of soap in 80 fl. oz. of water, and into it pour, with constant stirring, the lead solution. Heat the mixture to boiling-point, wash the precipitate with hot water by decantation, and remove occluded water by pressure. When dried over a water-bath the oleate is of a dirty-grey colour, strongly adhesive, and weighs about $5\frac{1}{2}$ oz. On ignition it yields 25 per cent. of lead oxide, as against the "about 28 per cent." of the "National Formulary." Lead plaster taken from stock gave an amount of lead corresponding to 28 per cent. of oxide.

Mercuric Oleate.—This and zinc oleate are now ordered in the B.P. to be made by the precipitation-method. In respect of the mercuric I must frankly confess that I do not know what advantage the present official process secures to the product. Nor am I aware that an authoritative statement has been made assigning a reason for the change. The old process was informative on a point important to pharmacists and physicians, about which the process of the 1898 Pharmacopœia is silent. The strength of the oleate expressed as oxide could be seen at a glance. It cannot be denied that for the Pharmacopœia to have appended to the description of the process of making, a statement of strength would have been a great convenience, since no data are supplied from which it can be calculated. There are a few points connected with the Pharmacopœia process to which attention may be usefully directed.

In the first place, what is to be understood by "powdered soap"? May it not mean either that the soap has been sufficiently dried to admit of its reduction to the pulverulent condition, or completely dried at 110° C. before it is reduced to powder? An olive oil soap of good quality in the form of powder usually retains about 3 per cent. or 4 per cent. of water, and probably such a soap would be held to meet the Pharmacopœia requirements. The "National Formulary" directs the soap to be used in the preparation of the oleates of lead and zinc to be dry. Is the oleic acid in the B.P. formula necessary? and in what way does it affect the product? On making two samples of the oleate and taking the official quantities—except that in one case the oleic acid was omitted—I find that the weights and consistence of the respective products are nearly the same, and that the colour of the one in which the oleic acid was used is both lighter and brighter. Is a water-bath temperature the most suitable for drying the oleate? In my judgment it would be preferable to conduct the operation in a dark room or cupboard, having a temperature of about 120° to 130° F. A higher temperature greatly favours reduction. What is to be understood by drying? To what extent is it to be dried? Undoubtedly the direction is not meant to be interpreted as meaning until the weight is constant. The indication is that consistence is rather to be taken as the guide. For instance, in taking a sample of well washed oleate from which occluded water had been removed, and placing it on the water-bath, it was found that after two hours it had lost only about 3 per cent. It was further noted that the oleate had separated into two layers, the upper being of a transparent amber colour, while the lower had a greyish granular opaque appearance. As a matter of interest, portions from the two layers were separately examined. The upper layer contained the equivalent of 17 per cent. and the lower 34 per cent. of metallic mercury. If the two layers were uniformly mixed, the product could scarcely be supposed to fairly represent the article intended by those who are responsible for the process. By direct estimation it will be found that this Pharmacopœia oleate as used by pharmacists will contain not less than 6 per cent. of water.

It may not be generally known that in the official formula the mercuric chloride is in excess, and the actual yield of dry product is little more than four-fifths of the actual yield. On testing the supernatant liquid after the precipitated oleate has subsided, evidence of mercuric chloride is afforded. A larger yield of oleate, closely approximating to the theoretical quantity, may be obtained by increasing the soap to slight excess.

What is the mercury strength of the oleate, and how can it be best estimated? Distillation with lime in a combustion-tube, as recommended for ammoniated mercury, is rather troublesome when applied to this oleate, as the mercury as it distils over is accompanied by fatty matter, and before it can be weighed it must be washed with ether.

The following process, which is Bennett's with a modification, is cleanly, easy of manipulation, and gives good results. About 2 grammes of the oleate is weighed into a small tared beater and stirred with 10 c.c. of ether until completely disintegrated; 25 c.c. of alcohol and 5 c.c. of hypophosphorous acid (30 per cent.) are then added. The whole is then placed and retained on a water-bath until the reduced mercury completely subsides, leaving the fatty matter in solution. The liquid is poured off, and the precipitate washed by decantation successively with alcohol and ether. Finally, the beater and mercury are dried at 100° C. and weighed.

Mercuric oleate, carefully prepared, and using the Pharmacopœia quantities, weighs 2½ oz., and will yield about 23 per cent. of metallic mercury, equivalent to almost 25 per cent. of mercuric oxide.

Zinc Oleate.—If the official quantities be taken, the dried oleate will weigh about 3½ oz., and will yield on ignition 11.59 per cent. of zinc oxide, the equivalent of 9.3 per cent. of metallic zinc. Theoretically normal zinc oleate contains the equivalent of 12.90 per cent. zinc oxide. Assuming the percentage of zinc oxide found to be an average one, zinc oleate ointment would contain the equivalent of about 5½ per cent. of zinc oxide as against 5 per cent. in the corresponding ointment of the 1885 Pharmacopœia. Here, as in the case of the mercuric oleate, the quantity of soap in the formula is insufficient to decompose the whole of the zinc sulphate. Doubtless the insufficiency is intentional. The oleate made by precipitation possesses at least one marked advantage over that prepared by direct combination of zinc oxide and oleic acid in that when dry it can readily be reduced to powder.

DISCUSSION.

The PRESIDENT said Mr. Naylor's information was most useful to men who have these oleates to dispense in the pharmacy. The use of ferric oleate in iron preparations of cod-liver oil is undoubtedly a good thing, and in lead oleate also the use of the sub-acetate should prove very useful. As to oleate of mercury, there is no doubt that the formula of the 1885 B.P. is a good one as regards strength, and in that respect the 1898 B.P. formula is of little practical utility. Mr. Naylor's estimation of the oleate is a very neat one, and it is also of value to know the strength of the 1898 B.P. oleate, which Mr. Naylor intimated. The information he had given is the more practical and valuable because it is so unobtainable. (Applause.)

Mr. MORLEY TAYLOR added his testimony to the President's concerning the value of Mr. Naylor's paper. He had used most of the oleates referred to, some of them frequently. The oleate of mercury of the 1898 B.P. is not satisfactory from a dispenser's point of view. A very small section of the medical profession realise that there is a mercury oleate, or of what nature it is. One gets a prescription for a 5 or 10 per cent. solution, and it is generally ordered to be painted on. The unguentum oleate of the 1898 B.P. is satisfactory. The ferric oleate is quite a new thing to introduce to medical men, and one which any medical man who takes an interest in his prescribing will appreciate.

Mr. LANGFORD MOORE asked Mr. Naylor if in making zinc oleate in small quantities, such as 10 lbs. or 20 lbs., is there is any danger in keeping the oleate, and not making it into ointment immediately, but as occasion requires? It has a tendency to become brittle, and a much better result is attained by making it into the official ointment immediately.

Mr. COUPLAND asked if it be possible that the B.P. seeks to produce an oleate of mercury which shall be free from uncombined oleic acid. The addition of oleic acid in the precipitation might probably be to overcome any alkalinity of the soap which would form mercuric oxide. As to drying, is it quite necessary to dry it at all? If the oleate after it is prepared be squeezed in a pot or stirred with a spatula and left, after a time the water can be pressed out, and if that be repeated for two or three days practically all the water is removed without heating at all. A sample of zinc oleate returned to him had a beautiful creamy colour, and he found, on examination, that it contained a lot of water, and was therefore not made according to the B.P.

Mr. NAYLOR, in reply, thought it quite possible to emulsify a cod-liver oil in which ferric oleate has been dissolved if care is taken not to use anything as an emulsifier which will react with the ferric oleate. Irish moss would be the thing. As to oleate of zinc, if it is carefully washed and well dried it will keep for some time, but if kept anything like six

months it will acquire the odour one is familiar with in oleic acid. In the mercuric chloride he did not know why oleic acid was added. It might be due to the fact that the author of the process thought there was just a possibility of the soap being sufficiently alkaline to produce a little mercuric oxide. The oleate with oleic acid does make a nicer-looking product, and one that is less adhesive there is, therefore, an advantage in using the acid. In drying one must not take the B.P. direction to dry too rigidly; the indication of the necessary amount of drying is rather in the consistence of the oleate. He never dried on a water-bath himself. (Loud applause.)

A vote of thanks to Mr. Naylor, heartily accorded, brought the proceedings to a close.

Notice of entry for the essay prize, consisting of a silver medal and 5*l.* (to which is added a copy of Remington's "Practice of Pharmacy"), for the best paper read during the present session before the Association, must be given to the Secretaries, Messrs. A. Latreille and A. F. Goode, on or before March 31, at 73 Newman Street, W.

Northampton and District Chemists' Association.

THE annual meeting of this Association was held on March 22 at the Black Boy Hotel, Northampton, the President (Mr. W. McKinnell) being in the chair. Mr. F. COWDERY (Hon. Secretary) in his annual report stated that they might congratulate themselves on the success that had attended the formation of their Association. They had nineteen members out of a possible twenty-one in the borough of Northampton. The series of meetings held during the year had been pleasant and profitable, and matters of importance to chemists had been discussed. The objectionable Clause 2 in the Companies Bill was successfully opposed, and the long-promised Pharmacy Bill was recognised by the members as being a long step in the right direction. The balance-sheet showed a sum in hand. The report and balance-sheet having been approved, the election of officers took place, with the following results:—President, Mr. W. McKinnell; Vice-Presidents, Messrs. W. D. Mayger and J. Clower; Hon. Secretary, Mr. F. Cowdery; Members of Committee, Messrs. G. Ingle, Smedley, W. Gatehouse, and D. McKinnell.

A communication was read from the Editor of THE CHEMIST AND DRUGGIST inviting an expression of opinion by the Association on Lord Avebury's Early-closing Bill. The principle embodied in the Bill was approved by most of the members present, and eventually, owing to the lateness of the hour, it was decided to defer further consideration of the subject until the next meeting.

It was decided that the Association be affiliated to the Federation of Local Pharmaceutical Associations.

Wolverhampton and District Chemists' Association.

A MEETING of this Association was held on March 25 to hear a paper by Mr. H. FORSTER, of the Wolverhampton and South Staffordshire General Hospital, on

DISPENSING SOLUTIONS.

The lecturer dealt in detail with the solutions kept ready for dispensing purposes in hospitals. The principal solutions used are chloral hydrate (1 gr. in 1 minim), magnesium sulphate (1 gr. in 2 minims), potass. acetate, potass. bicarbonate, potass. bromide, potass. citrate, potass. iodide, ammon. bromide, ammon. chloride, soda tartarata, sodium bromide, sodium salicylate (all 1 gr. in 4 minims). For the bromides camphor-water is used as the solvent. The solutions made of the strength of 1 gr. in 6 minims are ac. citric, ac. tartaric, ammon. carbonate, ferri et ammon. cit., ferri et quin. cit., ferri sulph., lithium citrate, potassium nitrate, silver nitrate, sodium sulphate, and zinc sulphate. In some cases the addition of 10 gr. of salicylic acid to a pint of solution (used where required) acts as a preservative. The quinine and iron citrate solution is made with equal parts of glycerin and water. Other solutions kept ready are sodium phosphate (1 gr. in 8 minims), calcium

hypophosphite (1 gr. in 12 minims), alum (1 gr. in 16 minims), sodium bicarbonate (1 gr. in 16 minims), and potassium chlorate (1 gr. in 24 minims). Solutions of borax, quinine, chloralamide, and butyl chloral hydrate, in suitable solvents, are also kept. Another class of dispensing-conveniences is suspensions of bismuth carbonate, magnesium carbonate, salol, phenacetin, and benzozol, in which tragacanth is employed as the suspending agent, except in the case of mag. carb. Mr. Forster then referred to an ointment-basis composed of equal parts of lard, anhydrous lanoline, and vaseline, which he has found excellent and which keeps well.

A vote of thanks to Mr. Forster and a short discussion on the Early-closing Bill closed the meeting.

Bradford Chemists' Association.

A MEETING of this Association was held at the County Restaurant, Bradford, on March 26, for the purpose of hearing a paper by Mr. W. R. BLACK, of Windhill, on

PROGRESS IN PHARMACY.

The President (Mr. R. W. Silson) occupied the chair.

The lecturer said he thought if they reviewed the whole position it would be found that the progress made by pharmacy had been very considerable, and that chemists were in a much better position to-day than they were a few years ago. In regard to profits, if it were possible to obtain figures comparing the amount of profit made in the drug-trade during the year 1868, for instance, with the profits for the year 1900, he thought they would marvel at the increase. It could not be doubted that pharmacy to-day found employment for a much greater number of properly trained workers than it had ever done in the past. In districts where formerly there was only one chemist's shop there were now three or four establishments, and perhaps a drug-store also. The very appearance of these establishments bore testimony to the progress which had been made, the modern pharmacy being generally a marvel of plate-glass and mahogany. The chemist of to-day was usually a well-educated and well-informed man, to whom the public went for advice upon all sorts of subjects. Their forefathers depended entirely upon the knowledge gained through their business training and such voluntary study as they cared to undertake. The tendency of the age was all in favour of increased education for every position in life, and whilst others were going forward chemists could not afford to stand still. In the Qualifying examinations he thought, however, that too much attention was devoted to the scientific side of the training, and too little to the technical side. Referring then to the political standing of the Pharmaceutical Society it had, he said, improved. It might be that the Council had not done exactly as they would like, but at least it must be acknowledged that the present Council had done a great deal more than their predecessors. As to the character of modern pharmaceutical products, the degree of excellence to which these had been raised was a matter of astonishment to all who had known medicine as it used to be. Speaking then of drug-stores, Mr. Black said there was a growing opposition on the part of the public to go to the stores only for proprietary articles and packed goods, and to the *bond-fide* chemist for goods in which there was a possibility of variation. It was found almost impossible now to run a store on purely pharmaceutical lines. Even the trade done by the chemist in proprietary articles and quack nostrums was not entirely an evil, for, whilst many of the articles were simply worthless impostures, there were some valuable and well-tried proprietaries the sale of which brought credit both to the producer and to the distributor. Even if the profits were not large the result of the far-reaching advertisement of these goods might be that people were brought to their shops who otherwise would not have set foot in them. To some extent prosperity could be, and had been, built up on proprietary medicines. He instanced the introduction of chlorodyne and of cod-liver-oil emulsion as cases in point. Mr. Black concluded by speaking of the great advantages of membership of local associations, and suggested that opportunities had been neglected and advantages left unused because of the apathy of the chemists in the past.

The CHAIRMAN agreed with the remarks in the paper, and was particularly pleased with the reference to local

societies. One capital item of progress which they had made in these latter days was the manner in which they had formed themselves into societies, and that they looked upon one another as brethren, not always of one mind, but still as brothers in the trade.

Mr. ROGERSON did not agree with the continual cry for extended education—a cry that had been indulged in for thirty years past. If they were to have extended education they must extend the advantages, both pecuniary and socially. Pharmacy would always remain a trade; they would always have their counter and their rows of specialities. In their city the chemist was looked down upon as a common tradesman, and was not invited to municipal social functions, whilst the grocer and dealer in a large way of business received invitations.

Mr. WADDINGTON said there was no such thing as standing still in educational matters—they must either go forward or backward. At the same time he did not think that the trade was ready for a curriculum, though it would be an advantage to students if they knew there was a set curriculum under which they would be examined.

Mr. BLACK briefly responded to a vote of thanks.

EARLY CLOSING.

A communication was read from the Editor of THE CHEMIST AND DRUGGIST with regard to the Early-closing Bill now before the House of Lords and asking the members their opinion with regard to it. The general feeling was of approval of the Bill and the exemption which was provided for chemists in Clause 9.

Tees-side Chemists' Association.

MEETINGS of the chemists of Middlesborough and district were held at the Grand Hotel, Middlesborough, on Wednesday, March 20. Amongst those present were Messrs Buck, Brackenbury, Matthews, Middleton, Close, Vernon, Harrington, and Thompson (Middlesborough), Walton (Darlington), Holt (Yarm), Agar and Stubbs (South Bank), and Ronchetti (Thornaby-on-Tees). Mr. Buck presided. The afternoon meeting was devoted to a discussion on

THE P.A.T.A. AND C.D.A.,

Mr. GLYN-JONES speaking. He said it is now generally admitted that the P.A.T.A. has been of great service to the trade and has secured profits which before were thrown away, while the tendency of proprietors now is to guarantee profits. He claimed this to be largely due to the P.A.T.A., and accordingly regretted that, though there is hardly a chemist in business who, in the course of the year, does not make an increased profit amounting to many times the 5s. subscription, there are only about a third of the chemists in business subscribers to the Association. He also spoke of the C.D.A. and its benefits; and the meeting responded by passing a vote in support of the Associations. At the evening meeting

THE PHARMACY BILL

was discussed, Mr. JOHN HARRISON, of Sunderland, first explaining the revised Bill. He said that until recent years he shared the opinion held by many chemists that there ought to be no sort of recognition of company-pharmacy. He had abandoned that opinion because he was convinced it is now impossible to prohibit companies keeping open shop for the sale of poisons. The companies are here, and he had little doubt that they have come to stay. He asked those who still think that the policy of non-recognition is the right one to remember the action taken by the Government in inserting a clause dealing with company-pharmacy in the Companies Bill. The Government recognises an anomaly in the present position, and Mr. Harrison pointed out the danger that if the Pharmaceutical Society does not make some attempt to deal with the matter the Government will sooner or later, and probably not in a way to commend itself to pharmacists. The Council had for its object the amending of the 1868 Act in such a way as to make that Act operative in face of the conditions of trade and of pharmacy, which have so changed since the passing of the Pharmacy Act. The Bill would preserve the use of titles to individuals, put a stop to the formation of one-man companies, and the directors' clause would be beneficial and

assure the best control, for the qualified assistant could not exercise the necessary control, as he might easily be over-ridden by his unqualified masters. Having referred to other points in the Bill, Mr. Harrison made an eloquent appeal to those present to rally round the Society in its endeavour to get the Bill passed into law, and he stated that former attempts of the Society to secure legislation had failed largely owing to the apathy of the trade.

A number of questions were asked and were replied to by Mr. GLYN-JONES, who dealt with various details of the Bill. He strongly emphasised the importance of the directorate clause. The Bill required all the support which chemists throughout the country could give it. He was delighted at the evidence that during the past few years chemists as a body were waking up to the possibility of organisation. He knew of no body of men so favourably situated for the purposes of organisation. Until the last week or so, so large and important a centre as Middlesbrough had been silent on pharmaceutical politics, and he was glad they had decided to form an association. It was surprising that every chemist did not see how much he personally had at stake in the Bill they were discussing. If the Bill, or something like it, did not become law chemists would not be able to blame the Pharmaceutical Council, their local secretaries, or their local associations, but would themselves be responsible for withholding that support which was so necessary to success in securing legislation.

The PRESIDENT moved the following resolution, which was carried unanimously:—

That this meeting approves of the draft Pharmacy Bill, and pledges itself to support the Pharmaceutical Society in its efforts to get the Bill passed into law.

Votes of thanks to Messrs. Harrison and Jones and the Chairman concluded the proceedings.

Exeter Association of Chemists and Druggists.

At a meeting of this Association on March 26, under the presidency of Mr. T. C. MILTON, the

SHOPS (EARLY-CLOSING) BILL

of Lord Avebury was discussed. As a result of the letter received from the Editor of THE CHEMIST AND DRUGGIST,

The PRESIDENT said he was in accord with the principles of the Bill, because if all the other shops were to be closed by local option he did not see why chemists should not. If they had one early-closing day fixed it would do away with a great difficulty in arranging early days for assistants.

Both Mr. VINDEN and Mr. LEMMON expressed themselves strongly in favour of the Bill; but Mr. APLIN said he was not altogether in favour of the proposed Bill, especially in regard to the proposal for closing the shops at 7 o'clock. They must have somebody on the establishment as long as they dispensed medicines.

The PRESIDENT pointed out that the Bill would not prevent any one from being on the premises; but Mr. APLIN also argued that there would be a difficulty in regard to the assistants and their work. Whilst he would be only too glad if he could get his living by working five hours a day, still he did not see why chemists should pay assistants their full salaries for doing half the amount of work. He dwelt on the disadvantages of the apprentice system, and contended that what was needed for assistants was a business training. They found nowadays that a man after passing through college knew nothing but the scientific side. While expressing dissatisfaction with certain points of the Bill, he approved its principles.

On the motion of Mr. LEMMON it was resolved *nem. con.* that the principles of the Bill be generally approved.

Workington Chemists' and Druggists' Association.

A MEETING was held on Tuesday evening, March 26, Mr. F. J. Birkett (Vice-President) in the chair. The SECRETARY read a courteous letter received from Mr. J. S. Randles, M.P. for the Cocker-mouth division, in reply to a resolution sent to him by the Association *re* the draft Pharmacy Bill. A request from the Secretary of the "Federation of Local Pharmaceutical Associations" that the Workington Association

should become affiliated to that body was unanimously acceded to.

The CHAIRMAN drew attention to Lord Avebury's "Shops (Early-closing) Bill," and a series of questions as to the opinion of the Association on the measure, which had been received from the Editor of THE CHEMIST AND DRUGGIST, were thoroughly discussed. The opinion of the meeting was generally favourable to the Bill, and replies were authorised.

Cardiff and District Pharmaceutical Association.

A VERY largely attended meeting of the members of this Association was held on Wednesday afternoon at the Park Hotel. Mr. A. Hagon presided, and amongst those present were Messrs. W. S. Glyn-Jones (London), R. Drane, D. Anthony, Jesse Williams, W. T. Hicks, T. P. Garrett (Newport), J. W. Phillips (Newport), R. Mumford, J. A. Jones, W. J. Sanders (Hon. Secretary), &c.

EARLY-CLOSING.

Mr. SANDERS read a letter he had received from Mr. W. J. Evans, Hon. Secretary to the Cardiff and District Chemists' Assistants' Association, stating that in the opinion of his Association the hours of business at present observed by chemists were longer than were necessary, and suggesting that the shops should close on Monday, Tuesday, Thursday, and Friday at 8, Wednesday at 1, and Saturday as usual. Mr. SANDERS moved that an endeavour be made to close all pharmacies in the central districts of the town from May 1 at 8 o'clock on four evenings of the week, 2 o'clock on Wednesdays, and at half-past 10 on Saturdays, and that for the suburbs a preliminary effort be made to close half-an-hour earlier than at present. This was seconded by Mr. J. WATKINS, of Risca, and carried, and at the suggestion of the PRESIDENT it was decided to appoint a Committee to carry out the arrangements.

Mr. A. J. BELLAMY, having reported on the scheme for co-operative buying, the SECRETARY stated that he had received a communication from the Editor of THE CHEMIST AND DRUGGIST with reference to the Shops (Early-closing) Bill. The six questions were put *seriatim* to the meeting, and replies in support of the measure were agreed to.

MR. W. S. GLYN-JONES

then delivered a lengthy address in advocacy of the Proprietary Articles Trade Association and the Chemists' Defence Association. In his prefatory remarks he congratulated the members present upon the formation of a local association which showed such promising elements of usefulness and prosperity. He believed it would have a very salutary effect on the *esprit de corps* amongst the chemists generally, and would be useful to them in many ways. In dealing with his own Associations Mr. Glyn-Jones spoke to the same effect as at Middlesbrough, reported on page 526.

The PRESIDENT said he had been a member of the P.A.T.A. almost from its inception, and he had great faith in it. That he told to every American patent-medicine dealer that came to him. He was a member also of the Defence Association. Before he joined that he was paying to an insurance company 35s. a year for protection from accidents or mistakes in dispensing. They might be very careful themselves in these matters, but a careless assistant might involve them in difficulties, and therefore no chemist could afford to undertake such risks for the sake of 10s. 6d. a year.

Mr. R. MUMFORD said he had often been struck with the fact that very few of the larger makers of proprietary articles had their names on the P.A.T.A. list, and he asked whether, if a chemist was found to be selling any article below price, the supply to him of all other articles on the list was stopped.

Mr. GLYN-JONES said the wholesale houses signed an agreement that they would withhold supplies of all articles on the P.A.T.A. list to anyone who was placed by the Association on the stop list. If a man unfortunately cut any one article he was added to the stop list, and that debarred him from buying any article through the wholesale houses, but he could, if he chose, go to the manufacturer and get any one article by signing a special agreement.

Mr. MUMFORD said he considered he got his 5s subscription to the P.A.T.A. returned to him through the extra profit

he got on Browne's chlorodyne, and he thought that all chemists ought to support the Association.

Several members stated that they formerly belonged to the P.A.T.A., and that their subscription had lapsed through indolence; and Mr. J. A. JONES suggested that the Commercial Secretary should be requested to collect subscriptions from those who were willing to join.

Mr. W. T. HICKS said he was not a member of the P.A.T.A., and he did not feel himself to be a criminal for not joining. He did not join because he felt that if he did, in the presence of the competition they had to encounter, it would be like having one of his hands tied. At the same time he acknowledged that the P.A.T.A. had succeeded a great deal better than he anticipated, and had done more for the drug-trade than any association which had been started. Unfortunately, chemists were not the only men who handled patent medicines. Wales was the happy hunting-ground for these medicines, of which there were more sold here perhaps than in any other part of the country. Such a quantity, in fact, that he thought the Pharmaceutical Society should add to their examination syllabus a general knowledge of the benefits of patent medicines. (Laughter.)

Mr. JESSE WILLIAMS moved a vote of thanks to Mr. Glyn-Jones, which Mr. HICKS seconded; and Mr. GLYN-JONES, in responding, proposed a vote of thanks to the President. Mr. R. DRANE, in seconding the motion, said he had always put his foot on all proprietary articles which manufacturers were endeavouring to force down their throats through the intermediary of medical men. It was their own downright cowardice which was the cause of their present melancholy condition. Individually he was looked upon as the wolf in medical fold, but he would rather be a transgressor in that respect than agent to American quacks. (Applause.) He was a deadly enemy to all proprietary medicines, but he could not stop the flood of folly. The inhabitants of Wales were reached by means of cheap religious publications, and it was through them that patent-medicine vendors obtained so large a number of customers.

The resolution was then carried, and the PRESIDENT briefly replied.

Glasgow Chemists' and Druggists' Assistants' and Apprentices' Association.

THE closing meeting for the session was held on March 20, when Mr. J. P. GILMOUR occupied the chair, and read a contribution from Mr. H. Rodwell on

SUGAR-REFINING,

as illustrated by a visit to the Glebe Sugar-house, Greenock. The author said the raw cane-sugar imported from the West Indies is first dissolved in hot water. This "raw liquor," which is very brown and muddy, is pumped to the top storey of the building. It is then filtered, first through cotton bags and animal charcoal. The "fine liquor," as this secondary filtrate is called, is then evaporated in vacuum-pans. The *masse cuite*, or cooked mass, as it may be called, consisting of sugar-crystals and syrupy mother-liquor, is slotted through an opening in the bottom of the vacuum-pan into the chamber beneath, where it is treated in the "centrifugals," where the crystals are separated from the mother-liquor. The mother-liquor is returned to the vacuum-pans, and a second crop of crystals obtained, which constitutes second-grade sugar. The uncrystallisable portion remaining is "molasses." The filter-bags through which the raw liquor is filtered are interesting; they dangle from the ceiling in hundreds, and such is the economy of space that they nearly touch one another. Each filter is about 8 feet long and 18 inches in circumference, cylindrical in shape, and composed of an external and an internal bag; the outer one, strong and coarse, supports the inside bag, which is the real filtering-material. The charcoal-filters are cylindrical and very large, each holding about 25 tons of granules of animal charcoal. The "fine liquor" obtained as filtrate is perfectly colourless; the filter is used until the liquor comes through slightly tinted. Roughly, 1 ton of charcoal suffices for the production of 1 ton of sugar. The charcoal is revived, and, with care, lasts for several years. The paper then entered into details of each of the steps taken for the production of sugar, finishing with an account of the process by which the charcoal is revived.

Public and Poor-law Dispensers' Association.

A MEETING of this Association was held at St. Bride's Institute, Ludgate Circus, E.C., on March 27, Mr. F. Noad Clark (President) in the chair. There was a goodly muster of members, and the Chairman, in opening the proceedings, intimated with regret the resignation of Mr. G. F. Forster from the post of Hon. General Secretary, which he had so long and so energetically held. Mr. Clark paid eloquent tribute to the zeal with which Mr. Forster had served the united Associations, and stated that Mr. Hewitt had consented to act as Secretary *pro tem*. The balance-sheet from the smoking-concert recently held is not yet made up, but a rough estimate shows a balance of about 4*l.* 4*s.* in hand. With regard to a question which had been addressed to the Association regarding the eligibility of prison compounders and dispensers for membership of the Association, the Chairman intimated that gentlemen holding all such posts would be heartily welcomed.

The Chairman then called upon Mr. MILLER (St. Pancras) to submit his

DISPENSING NOTES

Quick Method of Making Lin. Terebinth., B.P.—

Mr. Miller finds the B.P. process very tedious, and he tried various methods, and at last it occurred to him that it might be made in the same way as linimentum ammoniac, provided the soap were in solution. He therefore dissolved the soap in the whole of the water on a water-bath, dissolved the camphor in the turpentine, mixed the solutions, and got a satisfactory result. He puts the quantity required for 3 pints into a Winchester quart, leaving room for shaking, and finds that 3 or 4 gals. can be made in much less time than the same quantity of chloroform-water, without mess. Mr. Miller gave a practical demonstration of his method, producing a perfect, thin emulsion in a few minutes.

Cod-liver-oil Emulsion.—Mr. Miller exhibited a sample made according to the recipe given in "Pharmaceutical Formulas," which has the advantages over many other emulsions of being inseparable, very palatable, costs only 6*d.* per pint, and does not cause constipation, as an acacia emulsion is apt to do. It contains 50 per cent. cod-liver oil. Mr. Forster makes an emulsion with Iceland moss (3 oz. to 1 gal. of water), which takes up an equal quantity of cod-liver oil and keeps good for a week or two. Mr. Miller suggests the addition of a little chloroform as a good preservative.

Automatic Method of Making Solutions.—As solutions are in great demand in public dispensaries, and valuable time is taken in making them, the author has adopted an automatic method, which is simplicity itself. All that is required is a drying-bottle, with a piece of butter cloth and an indiarubber ring. The substance to be dissolved is put into the hollow stopper, and secured there by the butter-cloth, the cloth being in its turn secured by the ring. The bottle is filled with distilled water, so that it comes in contact with the salt, and solution immediately commences. Ammonium carbonate and potassium bicarbonate are dissolved in this way without loss of ammonia or carbon dioxide. Other salts which are not readily dissolved in a mortar are easily dealt with in this manner, and it will be found, by keeping two or three always going, there will never be any want of solutions. The bottles are an ornament to the dispensary, and cause a considerable amount of interest to the committee when they pay it a visit. The author showed a 60-oz. drying bottle, a useful size, as it dissolves 10 oz. (troy) in 60 oz. (imperial measure) of water, making a standard 1-in-6 solution.

DISCUSSION.

THE CHAIRMAN, speaking in regard to the lin. terebinth., said any he had made was much thicker than Mr. Miller's sample. The cod liver-oil emulsion was a perfect preparation, and the solution-method was an excellent idea for volatile salts such as ammonium carbonate. If a bicarbonate-of-potash solution were made cold there was no evolution of CO₂. The only disadvantage urged against the turpentine liniment was its thinness.

Mr. DORMAN stated that whole-alers supply a thick or a thin emulsion, as desired, but he had been told that it was thinned with water. He agreed with the Chairman that there was very little, if any, evolution of CO₂ if soda or potash solutions were made in the cold.

Mr. MILLER, replying to these and other questions by Messrs. Dunstan, Cairns, and Welford, showed that the turpentine emulsion was made strictly B.P. It thickens on keeping and at low temperatures. The solution-method was excellent for all salts difficult to dissolve.

THE exports of sponges from Cyprus during 1899 amounted to 5,631 okes (5,767*l.*) against 1,345 okes (2,085*l.*) in 1898.

Legal Reports.

High Court Case.

WHITTLE v. THE CALIFORNIAN SYRUP OF FIGS COMPANY.

IN the Court of Appeal on March 25, before the Master of the Rolls and Lord Justice Collins, counsel applied on behalf of the plaintiff for leave to appeal from an order of Mr. Justice Day in chambers, who directed that certain particulars should be given of the allegations in the statement of claim, and that the action should be stayed until particulars were given. The action, he remarked, was a somewhat peculiar one. It appeared that the plaintiff saw an advertisement in the *Daily Mail* recommending a particular medicine of the defendant company known as Californian syrup of figs. The medicine was described as of perfect purity, and in consequence of the representations in the advertisement plaintiff and his wife were induced to purchase some of the syrup of figs, which had most disastrous results. They were rendered so ill that the plaintiff claimed 140% special damages. The statement of claim alleged that the defendants' statement in the advertisement as to the efficacy of the medicine was false, and that this laxative was not genuine syrup of figs, but really contained little or no juice of the fig. It was further represented that the medicine was dependent for its effect on an irritant purgative, by reason of which the female plaintiff was rendered suddenly and violently ill. The learned Judge in the court below made an order that the plaintiff should give particulars of what the irritant purgative consisted, and of its harmful character, and he stayed the action until this was done. The learned counsel submitted that that was a wrong order to make, and that he should have to appeal from it.

The Master of the Rolls: You may have leave.

Weights and Measures Acts.

INACCURATE DISPENSING-SCALES.

ON March 26 at the Wednesbury Police Court, Messrs. Magors (Limited), chemists, Birmingham, were summoned for having unstamped scales and weights at their branch shop at Darlaston; and Albert A. Morgan, their manager, was charged with having unstamped scales in his possession. The Inspector stated that the dispensing-scales took 6 gr. to turn it when empty, and from 8 to 10 gr. when loaded with a drachm weight. Defendants admitted the offences, which, they pleaded, arose through an oversight, and were fined 1*l.* and costs in each case—in all, Magors (Limited), 2*l.* 18*s.* 5*d.*, and Morgan, 1*l.* 7*s.* 10*d.*

HARRIET THOMAS, trading as a chemist at Walsall Street, Willenhall, was fined 1*l.* 8*s.* 6*d.*, including costs, for a similar offence. Defendant in this case said she had only been at the shop six months, and had not, during that time, done any dispensing with the scales.

WM. THOMAS, chemist, of Market Place, Willenhall, was also charged with having an unstamped dispensing-scales in his possession which took 2 gr. to turn it when empty, and about 4½ gr. when loaded with a drachm weight. A fine of 1*l.* 8*s.* 6*d.*, including costs, was imposed.

Sale of Food and Drugs Acts.

MERCURY-OINTMENT.

AT the St. Augustine's Petty Sessions, Canterbury, on March 23, judgment was given in the case of Superintendent T. J. R. Jacobs v. Frederick Couper, chemist, Whitstable, the hearing of which was reported in the *C. & D.* last week. The Chairman said this was a case in which defendant was summoned for selling mercury-ointment, which was not of the nature, substance, and quality demanded, to the prejudice of the purchaser. The Bench, after careful consideration of the whole of the evidence, had decided to dismiss the case.

Mr. Mercer, a solicitor in Court, asked the Chairman of the Bench upon what grounds the magistrates dismissed the

case. The Chairman replied that the Bench preferred not to give their reasons.

GALL-AND-OPIMUM OINTMENT.

AT the South-Western Police Court on March 27, before Mr. Shiel, Mr. W. Walter F. Enniss, chemist and druggist, Wandsworth, was charged under Section 6 with selling gall-ointment for gall-and-opium ointment. Mr. Young, who prosecuted, called the inspector under the Act, who said he went into Mr. Enniss's shop on February 12, and asked the assistant for sixpennyworth of gall-and-opium ointment. The following is a plain narrative of what took place:—

Assistant: "Golden ointment?"

Inspector: "No; gall-and-opium ointment for piles."

The assistant went to the end of the counter where his master was standing, and after speaking to him brought a 1-oz. chip-box of gall-ointment which he handed to the inspector, who paid for it. The inspector then intimated the purpose for which he really desired the ointment, and proceeded to divide it into three portions as instructed by the Act.

Mr. Enniss thereupon came forward from the end of the counter, and said, "What did you ask for? I think my assistant has made a mistake."

Inspector: "If you do not know what was asked for, how do you know he has made a mistake?"

Mr. Enniss: "He has given you only gall-ointment."

The inspector stated in court that he repeated twice to the assistant what he required, and was proceeding, when the Magistrate said, "I think it might be very difficult to understand what was said in speaking of the two ointments in this manner."

Mr. Young was proceeding to take evidence on the analyst's certificate, which Mr. Beck (solicitor to the C.D.A., who appeared for defendant) admitted, and said his case was that a mistake had been made.

Mr. Beck: "When the assistant was called forward did he not say he understood you to say gall-ointment for piles?"

Witness: "After his master had asked him. Mr. Enniss said to the assistant, 'Why are you not careful; you have given him gall-ointment instead of gall-and-opium ointment.' Mr. Enniss himself intimated to me that he did not hear me ask for gall-and-opium ointment, although he was at the end of the counter at the time."

The Magistrate again interposed, saying it was evidently a mistake of the assistant, and as the words were so nearly alike in sound, it was quite possible for such a mistake to be made. He suggested that the summons be withdrawn. Mr. Young was proceeding to argue the point when

The Magistrate said, "Do you wish me to fine him 1*l.*, and no costs? The case ought not to be proceeded with. I think it is a mistake of the assistant, as the words are so nearly alike. If people want these kind of things they ought to write them down."

The summons was thereupon withdrawn.

County Court Case.

PRINTING PAMPHLETS.

IN the City of London Court on Wednesday, before Mr. Commissioner Kerr, an action was brought by Messrs. W. Speaight & Sons, 97 Fetter Lane, E.C., to recover the sum of 9*l.* against the defendant, Mr. A. Cumberland, trading as "Dr. John Gardner's Remedies," for printing 20,000 pamphlets for him descriptive of the remedies he sold. The defendant told the Court the goods were supplied to his principals. Their address was Ashley Park, Tipperary. His address was 22A Southwark Street. The account was made out to the company which he represented. Mr. Commissioner Kerr said that would not do; he could not have that. The defendant must pay the plaintiffs the money, and get it from the company. The defendant asked for time in which to pay the money. Mr. Commissioner Kerr declined, and said the money must be paid forthwith.

THE WEEK'S POISONINGS.—A dozen poisonings have occurred since our last report, only one of which is due to an unscheduled poison—hydrochloric acid. Carbolic acid and laudanum are each responsible for three fatalities; chloroform-anæsthesia caused two; and strychnine (in vermin-killer), oxalic acid, and liniment of belladonna for one each.

Bankruptcies and Failures.

Re W. F. HACKNEY, South Street, Earlsfield, Surrey,
Wholesale and Retail Chemist.

The public examination of this debtor was appointed to be held at the Wandsworth Bankruptcy Court on March 21, but the Official Receiver stated that the debtor was suffering from acute rheumatism, and he had a medical certificate to the effect that he was not able to attend. Under the circumstances he had no alternative but to apply for an adjournment of the examination, and the Registrar adjourned the examination to April 25.

Re RICHARD ENGLAND, 36 Mark Lane, E.C., trading as R. England & Co., Chemical Merchant.

This debtor applied on March 28 at the London Bankruptcy Court to pass his public examination. The observations of the Official Receiver, and the statements of the debtor having been read, the debtor was examined at some length regarding his accommodation bill transactions, and eventually he was allowed to pass.

Re WM. THOMAS, Market Place, Willenhall, Chemist and Druggist.

A PETITION on behalf of this debtor (now residing at 52 Walsall Street, Willenhall, formerly New Road, Willenhall) has been filed at the office of the Wolverhampton Official Receiver. The gross liabilities are placed at 2,278*l.* 5*s.* 10*d.*, of which 1,570*l.* 1*s.* 4*d.* is expected to rank for dividend. The assets are estimated to produce 334*l.* 0*s.* 3*d.*, leaving a deficiency of 1,186*l.* 12*s.* 1*d.* The summary of debtor's statement of affairs shows that the assets are largely make up as follows:—Stock-in-trade, 250*l.*; book debts (55*l.* good, 60*l.* 0*s.* 9*d.*; trade fixtures, &c., 20*l.*; life policies, 17*l.* Bankrupt attributes his insolvency to "having become liable for 300*l.* and an annuity of 1*l.* a week when I took over my business; illness of wife and children; and had trade." The Official Receiver, in his observations, states:—

The bankrupt is 40 years of age. Prior to February 9, 1894, he assisted his father in a business at Market Place, Willenhall as a chemist. A partnership agreement was then entered into between them, but the father died on March 26, 1894. The bankrupt then undertook to pay his mother 1*l.* a week, and also 300*l.* to the trustees under his father's will. These liabilities were guaranteed by the bankrupt's father-in-law. The bankrupt has paid the 1*l.* a week to his mother, but has paid no portion of the 300*l.* He has continued the business up to the present time. In 1896 he purchased another chemist's business, at 52 Walsall Street, Willenhall, for 100*l.* This sum he paid by instalments, borrowing 20*l.* from his father-in-law. In 1898 he sold this business for 200*l.*; but in August, 1900, it was acquired by his wife, who now carries it on and claims the whole of the assets in connection with it. The bankrupt has known for the last eighteen months that he could not meet his liabilities, and for the last six months he has been sued by creditors. The unsecured liabilities consist of 814*l.* 12*s.*, due to the trustees under his father's will, trade debts 667*l.* 5*s.* 7*d.* (the whole of which appear to have been contracted since January, 1900, and 38*l.* 14*s.* 9*d.* miscellaneous items. The whole of the household furniture is claimed by the bankrupt's wife under a bill of sale, executed on March 2, 1901. The consideration is stated to be an advance of 155*l.* by the wife, who obtained the money upon mortgage of some property she has.

The first meeting of creditors will be held at the Official Receiver's office on April 3, 1901, and the public examination is fixed for the same date at the County Court.

Bazette.

Partnerships Dissolved.

Seeley, N., and Pitty, H., custard powder manufacturers, Broad Street House, New Broad Street, E.C., under the style of Norman, Heather & Co.

Snow, H. M., Walker N. H., and Redfern, T. W., perfumers, St. Martin's Lane, and Warwick Street, Charing Cross, W.C., under the style of Bayleys, otherwise Bayley & Co.

The Bankruptcy Acts 1883 and 1890

RECEIVING ORDERS

Hyde, Robert Boyle, and Nash, Thomas (carrying on business as Hyde, Nash & Co.), Philpot Lane, E.C., druggists-merchants.

Kent, Thomas Ramsey, New Cut, Lambeth, S.E., Westminster Bridge Road, S.E., and Blackfriars Road, S.E., chemist.

ADJUDICATIONS.

James, Windsor Owen (of the firm of Sime & James), Haverfordwest, mineral-water manufacturer.

Kent, Thomas Ramsey, New Cut, Lambeth, S.E., Westminster Bridge Road, S.E., and Blackfriars Road, S.E., chemist.

McCulloch, Robert Leslie, Bradford, late Eccles, and Stalybridge, Lancashire, herbalist.

Murphy, Thomas Nelson, Lancashire, physician and surgeon.

From the Scottish Law Courts Record.

PETITIONS PRESENTED FOR SEQUESTRATION.

Grosvenor, West & Co., 46 Bihao Street, Glasgow, manufacturing chemists, and **Alfred Miller**, residing at 31 Campbell Street, Strathbungo, sole partner. Agents, McGrigor, Donald & Co., solicitors, Glasgow.

Deeds of Arrangement.

Calvert, William David, 15 Hexthorpe Road, Doncaster chemist and druggist. Trustee, Joseph H. Glover, 6 Priory Place, Doncaster, I.A. Dated, March 18; filed, March 25. Liabilities unsecured, 104*l.* 19*s.* 6*d.*; estimated net assets, 45*l.* Assignment upon trust, &c., with power to trustee to accept from debtor a composition. The following are scheduled as creditors:—

	£	s.	d.
Brook, Parker & Co., Bradford ...	26	0	0
Watson, W., Doncaster ...	11	0	0

Reay, John, 41 Lee Mount Road, Halifax, chemist and druggist. Trustee, Jonathan I. Learoyd, Lancashire and Yorkshire Bank Chambers, Halifax, C.A. Dated, March 12; filed, March 19. Liabilities unsecured, 209*l.* 5*s.* 5*d.*; estimated net assets, 120*l.* The following are scheduled as creditors:—

	£	s.	d.
Oldfield, Pattinson & Co., Manchester ...	17	0	0
Savage, J., & Co., Bradford ...	18	0	0
Sumner & Co. (Limited), Liverpool ...	10	0	0
Walker, F., Halifax ...	55	0	0
Wilkinson & Simpson (Limited), New-castle-on-Tyne ...	18	0	0

THE KODAK AGREEMENT.

At the annual meeting of Kodak (Limited), held at Winchester House on March 28, Sir James Pender, Bart., in the chair, Mr. DEAN asked on what terms films were supplied to retailers, and gave an instance of one chemist who had, in consequence of the terms on which Kodak films, &c., were supplied, removed them from his sale windows, and added Mr. Dean, from the appearance of these windows one would not know there was such a company as Kodak in existence. This particular photographic chemist had substituted a small camera for those of this company, and said he intended to push the sales of that class of goods. This was a state of things which he (Mr. Dean) thought prejudicial to the Kodak business.

Mr. GEO. DAVISON, the managing director, said that the company never made any condition which would restrict any photographic dealer from merely handling their goods—it would be a useless restriction which would never enter their heads. What they had done had been simply for the protection and safeguarding of their own business, which, as all knew, was particularly in connection with rollable film apparatus and rollable films. What they had done was to make it a condition that if a dealer sold their rollable film apparatus and rollable films, then he must not sell other goods of the same class made by other firms. That they had done for the reason that the business in these films had been entirely made by them; there never would have been trade of any value in photographic films if it had not been exploited by Kodak (Limited), and they deemed they were justified—seeing that dealers made a big profit out of these films—in restricting them to the sale of their goods only. As a matter of fact, the restriction had been in force for some time, and they were selling more films than ever they did before. (Applause.) They wanted to make it quite clear to dealers that they were not absolutely bound to sell this company's goods if they liked.

New Companies & Company News.

ELECTRITES COMPANY (LIMITED).—Capital 500*l*. Objects: To acquire inventions and a registered design from F. B. Lacy, and to carry on the business of makers of electrical apparatus, surgical appliances, &c. Registered without articles of association. Registered office, Red Cottage, Pinner, Middlesex.

TELEGA OIL COMPANY (LIMITED).—Capital 175,000*l*., in 1*l*. shares. Objects: To acquire freehold and other lands, mineral and other properties, grants, concessions, claims, licences or authorities of and over lands, mineral properties and petroleum and oil-bearing lands in Roumania or elsewhere in Europe or Asia, to sink wells and make borings, to adopt agreements with certain dealers in and refiners of petroleum and other mineral-oils and their products.

WILSON CHEMICAL COMPANY (LIMITED).—Capital 1,500*l*., in 1*l*. shares. Objects: To adopt an agreement with J. MacNaull Wilson to carry on the business of chemists, chemical manufacturers, importers of and dealers in pharmaceutical, chemical, industrial, and other preparations and articles, compounds, and drugs, dealers in proprietary articles, makers of electrical, chemical, photographic, and scientific apparatus and materials, &c. The first subscribers are:—J. MacNaull Wilson, 11 Broadway, New York, U.S.A., merchant and engineer, with 500 shares; G. F. Marriage, 41 Circus Road, N.W., gentleman, with 500 shares; M. F. Laffan, Nassau Street, New York, U.S.A., journalist, with 100 shares; H. R. Chamberlain, Nassau Street New York, U.S.A., journalist, with 100 shares; J. H. Colls, 5 Coleman Street E.C., builder, with 100 shares; B. Emanuel, 2 Finsbury Circus, E.C., architect, with 100 shares; and J. T. Day, 40 Finsbury Square, E.C., journalist, with 100 shares. No initial public issue. The subscribers are to appoint the first directors. Qualification, one share.

RECORDINE (LIMITED).—Capital 2,000*l*., in 1*l*. shares. Objects: To acquire the business known as the Recordine Syndicate and the various recipes, formulas, and preparations of and belonging to such business, and to carry on in England and elsewhere the business of chemists, druggists, soap, and perfume manufacturers, dyers, oil and colourmen, manufacturers of electrical, surgical, photographic, and scientific apparatus and materials, &c. The first subscribers are:—Mrs. A. A. George, 20 Trumlett Grove, Junction Road, N.; H. M. Davis, Briar Cottage, Hermitage Road, Westcliff-on-Sea, Essex, insurance-broker; Mrs. E. Jarvis, Medina Lodge, Anerley Road, Westcliff-on-Sea; T. R. Trower, 25 Whitehall Park, N., seed-dealer; W. G. George, 20 Trumlett Grove, Junction Road, N., chemist's assistant; F. Jarvis, 110 Cannon Street, E.C., mining-agent; A. S. Turk, 81 Shernhall Street, Walthamstow, clerk; E. Jarvis, 110 Cannon Street, insurance-broker; and A. B. George, "Old Anchor," Richmond Road, Twickenham, journalist. No initial public issue. The number of directors is not to be less than two nor more than five. The subscribers are to appoint the first. Registered office, 15 Farringdon Avenue, E.C.

A. J. WHITE (LIMITED).—The directors have declared a dividend on the preference shares of 6 per cent. per annum for the quarter ending March 31.

HEADLAND'S (LIMITED).—At a sale of shares at Brighton on March 20, 200 *l*. 6-per-cent. cumulative preference shares in this company realised 1*l*. each.

JAVA CINCHONA.—The general meeting of the shareholders of the West Java Cinchona-cultivation company will be held on April 2, when a dividend of 3 per cent. will be proposed.

SCHWEPPES (LIMITED).—The directors recommend a dividend of 2½ per cent. on the preference shares, making 5 per cent. for the year, and 3½ per cent. on the ordinary shares, making 7 per cent. for the year, placing 6,000*l*. to reserve, and carrying forward 5,687*l*.

MAYPOLE COMPANY (1899) (LIMITED).—The first annual report of the directors, extending over 13½ months, to be submitted at the meeting to be held on March 28, states that there is a net profit of 3,818*l*., which, after deducting directors' and auditors' fees, writing off a sum for depreciation of leases, placing to reserve account 313*l*., and providing for the first and second mortgage debentures and making other deductions, leaves a balance of 245*l*., which the directors propose to carry forward.

GOLD SPINNER SYNDICATE (LIMITED).—The petition of Grosvenor, Chater & Co. (Limited) for the compulsory wind-

ing-up of the Gold Spinner Syndicate (Limited) was granted by Mr. Justice Wright. Mr. Kirley, who appeared for the petitioners, said the company was formed with a capital of 25,000*l*. to carry on the business of grocers, chemists, medicine-sellers, and wine and spirit merchants, but all it did was to publish what was called a monster magazine called the "Gold-spinner," or something of that kind.

MAGOR (LIMITED).—The report of the directors states that the trading account for the nine months ending December 31, 1900, shows a profit made by the shops of 298*l*., as against a loss of 1,912*l*. for the six months ending March 31, 1900. This profit has been absorbed by management, advertising, expenses incurred through a special valuation of stock, and other general charges. After providing for these, there remains a deficiency of 931*l*. for the nine months, as against a deficiency of 2,874*l*. for the previous six months.

LORIMER & CO. (LIMITED).—The first annual meeting of this company was held this week. There are only eight shareholders, four-fifths of the capital being held by the managing directors. The meeting was, therefore, of a private nature, but we are informed that after placing 1,642*l*. to reserve, 350*l*. to contingency, and 239*l*. to depreciation, as well as paying expenses of floating and directors' fees, a dividend of 8½ per cent. was declared on all shares, and 234*l*. 5s. 9*l*. was carried forward. A feature of the year's work, which is probably a record in the wholesale drug credit business, is the small amount of bad debts incurred during the year—viz., less than 17*l*.

BAISS BROTHERS, & STEVENSON (LIMITED).—The statutory meeting of this new company was held at the company's offices, Jewry Street, Algate, E.C., at noon on Monday, March 25. Owing to the absence of Mr. Arnold Baiss, through indisposition, Mr. Sydney Baiss occupied the chair. Introducing the new directorate, Mr. Baiss said that at this purely statutory gathering there was little business to be transacted, and, of course, just as little for him to say. The shareholders, however, might rely upon the directors using their best endeavours and abilities to carry on the business for the benefit of all concerned therein. In reply to a shareholder, who asked whether the business was running in its usual course, the Chairman said the company was obtaining excellent terms, and was generally getting on in a most satisfactory manner. The meeting then concluded.

UNITED ALKALI COMPANY (LIMITED).—The annual general meeting of shareholders took place at Liverpool on March 22, Mr. John Brock (chairman of the directors) presiding. He moved the adoption of the report, particulars of which were published in our issue of last week, page 489. Mr. Ellis thought both the report and the chairman's statement very unsatisfactory. Either the company had been totally mismanaged or the capital was in excess of what it ought to be. He suggested that until they could show better results the directors should forego their fees, amounting to 4,400*l*. Mr. C. P. West said the amount set aside for depreciation was out of all proportion to the state of the concern and the amount of capital invested. He suggested that a gentleman of wide commercial experience should be appointed on the board to assist the technical members. The Chairman, replying, did not agree with the latter suggestion, as anyone not acquainted with their particular line of business would be of very little use. He stated further that the directors would have to consider in the near future how they could best place themselves in command of further capital for such improvements in economical manufacture as were absolutely essential to their welfare. The report was adopted.

HEARNS (LIMITED).—The statutory meeting of the creditors and shareholders of this company was held on March 28 at the Carey Street offices of the Board of Trade, Lincoln's Inn Fields, W.C., before Mr. A. S. Cully, Assistant Receiver. The chairman reported that the company was formed in 1898, with a capital of 15,000*l*., and the books showed that from 1891 to 1898 profits of about 1,000*l*. per annum were made. In the latter year Messrs. Durlacher and Thornton acquired a half-share in the business with the idea of forming a limited company, and an agreement was made for the company to acquire the business as from July, 1898, for 10,000*l*. No valuation of the business was apparently made on behalf of the company. The vendors' shares were divided by

issuing 5,000 ordinary shares to Mr. Hearn, 2,500 preference shares to Mr. Durlacher, and the other 2,500 to Mr. Thornton. Only 282 further ordinary shares were allotted, and they represented the whole of the working capital of the company. A debenture for 1,000*l.* covering the whole of the assets, was given in March, 1899, to Mr. Thornton, sen., to secure a cash-advance of the same amount. The business was apparently carried on at a loss by the company throughout, heavy losses having been incurred in respect of contracts for the illumination of *filles* and gardens. The statement of affairs showed that after providing for the debentureholder's claim there would be assets 1,426*l.*, available to meet unsecured liabilities, 2,768*l.*; whilst the deficiency to the contributories amounted to 11,617*l.* The creditors nominated Mr. E. J. Palmer, chartered accountant, as their liquidator, but no resolution was passed by the shareholders, and the appointment will be made later by the Court.

Trade Notes.

BLAUD'S PILLS.—We should have said in referring to Messrs. Arthur H. Cox & Co. that when buying by weight at 1*s* 4*d.* per lb. not less than 7 lbs. can be obtained at that rate.

ELECTRITES.—Since the note about Electrives in the *C. & D.* March 16, page 452, Messrs. S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C., inform us that the makers have altered the pattern and increased the price. Electrives now sell at 2*s* 3*d.*

MESSRS. W. EDWARDS & SON, 157 Queen Victoria Street, E.C., have just issued the 1901 edition of their catalogue of proprietary medicines and druggists' sundries. A list of protected articles occupying four pages is the first item in the catalogue; this is followed by the portions devoted to proprietary medicines and druggists' sundries.

"VIBRONA" ART SERIES.—Messrs. Fletcher, Fletcher & Co. (Limited), Holloway, London, N., are issuing a pretty little booklet about the first series of six historical British pictures which they have published. The booklet is got up in the artistic modern style, and has miniature reproductions of the pictures printed on vellum. A copy of the booklet will be sent to any CHEMIST AND DRUGGIST subscriber who sends a postcard to Messrs. Fletcher, Fletcher & Co.

"PREMIER" HAIR-DYE.—Messrs. Burgoyne, Burbidges & Co., 12 and 16 Coleman Street, E.C., have produced a series of one-solution hair-dyes under the name of the "Premier." It is put up in dark panelled bottles enclosed in a carton, a snitable brush for applying the dye to the head and beard being enclosed. The "Premier" series is supplied in black, dark-brown, medium-brown, light-brown, chestnut, gold-blond, and ash-blond shades. No name or address is given on the bottles, but the retailer's name can be added in a space left for the purpose.

A NEW SACHET.—The "Royal Sovereign Perfume-sachet," which is being put on the market by Messrs. Ayrton & Saunders, of Liverpool, is cheap, effective, and appropriate. The envelope is a representation in colours of the Royal Standard, with miniature portraits of the King and Queen



in the centre. The sachets, which are produced to retail at one penny each, are attractive to both the ocular and olfactory senses, and should prove a popular seller during the coming season.

FINE PRINTING.—Messrs. Spottiswoode & Co. (Limited), New Street Square, E.C., are issuing a quarto-demy catalogue

illustrating the results of printing methods which they employ, especially in relation to trade announcements. Some new styles of type, in conjunction with blocks produced by pen, wash, pencil, photos, litho-drawings, and mechanical-etching, are included. The catalogue is excellently printed, and the types chosen are good in form and used in the sparing manner upon which the telling effect of an illustration or page, and therefore its force as an advertisement, depends. Much good judgment is shown in the way the matter is placed upon the page, and the style generally bears witness to the steady advance of artistic feeling in all branches of printing. The catalogue is marked 2*s*. 6*d.*

DISINFECTANTS FOR THE CAPE.—Jeyes' Sanitary Compounds Company (Limited) 64 Cannon Street, E.C., have, in reference to the consumption of disinfectants at the Cape, shown us a bundle of cablegrams received by them this month, which are chiefly orders for Jeyes' fluid and its compounds. The cablegrams are a striking revelation of the panic that the plague has caused in the Cape, for day after day orders have been coming to the company and culminated last week in an order for 10,000 gallons, which was shipped by the *Kinfauns Castle*, the Union Castle line having consented to give preference to cargoes of disinfectants while the plague continues. The Cape agent of Jeyes' in his last cable stated that there is a "strong demand" for his goods in the Cape, and in a previous telegram he intimated that in the Government proclamation Jeyes' fluid was the only proprietary disinfectant specified as being recommended. Our Cape correspondent in this week's letter also refers to the matter.

Business Changes.

Notices are inserted free in this section if properly authenticated.

BOOTS (LIMITED) will shortly open a new establishment at the corner of Station Road, Stroud Green.

MR. GEORGE J. SMITH has taken up the South Coast journey for Messrs. Armour & Co., Mr. T. E. White having left the firm.

AERATORS (LIMITED) have removed from Broad Street Avenue, E.C., to larger and more convenient premises at 120 Oxford Street, London, W.

MR. W. G. SKOULDING, chemist and druggist, Dunmow has sold his business to Mr. W. M. Kinross, pharmaceutical chemist, Battersea Park Road, S.W.

MESSRS. WRATHALL & Co., 26 Old Hall Street, Liverpool, have acquired the old-established business of Messrs. Charles Spence & Co., chemical-agents and general-produce brokers, Liverpool.

MR. THOMAS SILK, St. John's Pharmacy, Worcester, has disposed of his business to Messrs. Anderson & Virgo, the Foregate, Worcester, who are having the same refitted and brought up to date.

MR. HENRY WHEELER, of 9 Great Tower Street, E.C., and Mr. August Finsler have dissolved partnership by mutual consent. Mr. Wheeler continues business at the above address as a first-hand dealer in drugs, spices, essential oils, and kindred articles.

MR. F. G. EARL, chemist and druggist, is now manager of a pharmacy belonging to Mr. Taylor at Leeds. The business at Chorlton-cum-Hardy, lately carried on by Mr. Earl, will be continued by his mother, and will be under the management of a qualified chemist.

MR. WALTER ADAMS, chemist, 116 Fitzroy Street, Cambridge, has taken into partnership Mr. John Evans, chemist, who was for the last six years manager to Mr. Lloyd, the Dvey Pharmacy, Aberdovey, North Wales. Mr. Evans has not bought the business, as was stated in last week's issue, and the business will be carried on under the name of Adams & Evans.

DURING the year 1900 4,000 tons of borax were exported from Salta, Northern Argentina.

Westminster Wisdom.

EARLY CLOSING.

The Committee of the House of Lords again met on Friday, March 23, when evidence from Birmingham and other provincial towns, chiefly from Grocers' Associations, in favour of the Bill was taken. On Monday, March 25, Sir John B. Maple gave evidence in favour of voluntary early closing, and against Lord Avebury's Bill.

CHINA OPIUM-TRADE.

Mr. H. J. Wilson has given notice in the House of Commons that he will call attention to the Indo-Chinese opium-trade, and will move that in the revision of treaties between this country and China it is desirable to offer to the Chinese Government complete freedom to take such measures, whether by increased taxation or otherwise, as it may judge necessary for the suppression of the opium-traffic.

AGAINST THE SUGAR-TAX.

The Confectioners' Association has issued a circular to members of Parliament appealing for support in opposing any attempt on the part of the Government to impose a tax on sugar. It is urged that the enormous developments which have taken place in the confectionery industry during the past fifteen or twenty years are largely attributable to the inexhaustible supply of cheap and fine sugars on the English markets, and directly a duty is put upon sugar this supply will cease, and the trade generally will be thrown into a state of disorganisation. Statistics are quoted to show that the present amount of sugar used annually in the manufacture of confectionery is 404,000 tons.

GENERAL MEDICAL COUNCIL RECEIPTS.

In accordance with the Act of Parliament, returns of the receipts and expenditure of the General Medical Council and of the Branch Councils, also of receipts and expenditure of the Dental Registration Fund, for the year ended December 31, 1900, were presented in the House of Lords on March 26. The report shows that the total income of the Council for the year was 8,543*l.* 1*s.* 1*d.*, the contributions by the Branch Councils being—English, 4,491*l.* 14*s.* 1*d.*; Scottish, 2,718*l.* 15*s.* 10*d.*; and Irish, 874*l.* 0*s.* 1*d.* The total receipts of all Councils amounted to 11,956*l.* 5*s.* 3*d.*, and the expenditure to 9,910*l.* 12*s.* 2*d.* The fees and other expenses of the General Council absorbed 3,459*l.* 10*s.*, while the Council's printing-account amounted to 1,127*l.* 8*s.* 10*d.* On December 31, 1900, 1,552*l.* 13*s.* 1*d.* stood to the credit of the English, Scottish, and Irish Branch Councils.

College Notes.

NORTH OF ENGLAND SCHOOL OF PHARMACY.—The students of this Newcastle-on-Tyne School recently paid a visit to Messrs. James & Co.'s lead-works, Ouseburn, which were described in the *C. & D.* last year.

NOTTINGHAM SCHOOL OF PHARMACY.—The students of this school paid a visit the other day to the chemical-works at Gilt-brooke, which are carried on by the Corporation of Nottingham for the manufacture of sulphuric acid from the spent oxide of the gas-works.

SHEFFIELD COLLEGE OF PHARMACY.—On Saturday, March 23, the students of this college, accompanied by the Principal, visited Lord Halifax's conservatories at Hickleton, and on March 27 the cyclops-works of Messrs. Cammell (Limited), and witnessed the rolling of a 20-ton armour-plate. The analytical laboratory was also inspected, besides the works generally.

PROFESSOR MOISSAN ON "SULFAMMONIUM."—At the Academy of Sciences M. Henri Moissan recently gave a description of an investigation which he has just completed on "Sulfammonium." He states that by the action of sulphur on liquefied ammonia gas a purple liquid is obtained capable of solidification at a temperature of -85°C . He demonstrates at once that a compound, not a mere mixture, is the result. The new compound gives a characteristic absorption-spectrum.

Birth.

MAIR.—At 388 Morningside Road, Edinburgh, on March 21 the wife of Mr. William Mair, F.C.S., of a son.

Marriages.

DEACON—STEWART.—On March 14, at St. Mary's, Charlton Kings, Cheltenham, by the Rev. W. Hastings Kelk, M.A., Chaplain of the Gold Coast Colony, assisted by the Rev. F. W. Parkinson, M.A., Thomas Deacon, Postmaster-General of the Gold Coast Colony, West Africa, younger son of Thomas Deacon, formerly of Milton Abbott, Tavistock, Devon, to Mary Ariel Stewart, M.B., B.S., London University, eldest daughter of James Stewart, of Lamorna, and the County Drug Company, High Street, Cheltenham.

PALMER—RICHARDS.—At the parish church, Grimsby (by licence), on March 26, Tom Clifford Palmer, J.P., of the firm of E. Palmer & Son, chemists and druggists, to Isabel (Belle), widow of the late Edward Mannering Richards, of Belmullet, co. Mayo.

RICHARDSON—STARK.—On March 21, at All Saints' Church, Freshwater, by the Rev. J. Merriman, D.D., William E. H. Richardson, M.P.S., chemist and druggist, Freshwater Bay, only son of Mr. J. E. Richardson, M.P.S., Yarmouth, Isle of Wight, to Minnie Annetté Stark, youngest daughter of the late Mr. John Stark, Freshwater Bay.

Deaths.

BACON.—At Ilford, on March 17, Mr. Henry Joseph Bacon, chemist and druggist, formerly of Elstree. Aged 65.

COX.—On March 25, at The Poplars, Shepton Mallet, Mr. Harry Bertrand Cox, pharmaceutical chemist. Aged 30.

HEALE.—At 40 Park Road, Ilford, on March 20, Kenneth Douglas Oakley, the infant son of Mr. T. A. Oakley Heale, chemist and druggist (of Messrs. Burroughs, Wellcome & Co.'s staff). Aged 2 years 4 months.

KNOWLES.—On February 18, Mr. Edward Knowles, chemist and druggist, York. Aged 59.

MORRIS.—At Bülth, on March 16, Mr. Philip Samuel Morris, chemist and druggist. Aged 70.

PRESTON.—On March 19, at Kennington Road, S.E., Mr. Henry Preston, pharmaceutical chemist. Aged 43.

ROBERTSON.—At Elgin, on March 25 Mr. William Robertson, pharmaceutical chemist. Aged 77. Mr. Robertson was a native of Alvah, Banffshire, and served his apprenticeship with the late Mr. Bartlett Elles, of Banff. After leaving Banff he was for some time with the Glasgow Apothecaries' Company, where he came in contact with Professor Cooper and Professor Balfour, being employed by them to arrange and classify their collections of specimens. Mr. Robertson began business on his own account in Elgin about fifty years ago. For the past few years his son, Mr. Alexander Robertson, chemist and druggist, had been in partnership with him, and it was only in July last that he practically severed his connection with the business.

STEWART.—On March 9, at Mona Lodge, North Strand, Limerick, Nannie, wife of Mr. Joseph Stewart, L.P.S.I., 48 George Street, Limerick.

STOREY.—On March 12, Mr. Thirlwall Storey, chemist and druggist, Alston, Cumberland. Aged 77.

WICE.—At St. John's Villas, Wakefield, on March 26, Mr. Jonathan Haigh Wice, chemist and druggist. Mr. Wice, who had retired from business, was formerly Chairman of the Wakefield School Board, and for a long time had been one of the Governors of the Wakefield charities, and took a very active part in the management of the Girls' High School and the Grammar School. He was also one of the most useful members of the Council of the Clayton Hospital.



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

Fundamentals.

SIR,—In commencing his letter in last week's issue Mr. Reid states my position clearly and fairly; but when he lays down his own case he flounders, he is vague and inconsistent. He declares that the House of Lords' decision smashed utterly the principle of personal qualification which I say is our sheet anchor. "And all thinking men know this," he goes on to say, and by way of illustration cites other decisions which are inconsistent with that one. I am not aware how Mr. Reid regards the ex lord of Cannon Street, who, of course, may not be a thinking man, just as I may not be one. Mr. Wootton said in the Council-chamber (*vide C. & D.*, December 8, page 926): "So long as the Pharmacy Act stood on the Statute-book they had a perfect right to ask that every person carrying on the business of pharmacy should be qualified." It was proposed to accomplish this by means of a qualified directorate clause. This is now demonstrated to be impractical. There is thus no means left by which to make the provisions of the Act effective but the method advocated by us.

Yours faithfully,

R. L. GIFFORD.

Blackburn, March 26.

Oleum Amygdalæ.

SIR,—A firm of wholesale druggists, supposed to be at the very top of the tree, have issued recently a pamphlet of their opinions on the *Pharmacopœia* and its commentators. In it I find the wording adapted (on our labels and price-lists) is strictly descriptive—that is to say, as follows:—

OLEUM AMYGDALÆ ANG.

Expressed in England from peach and/or apricot kernels.

Now, one might as well claim that he had affixed a fully-descriptive label to olive oil, were he to mark it as follows:—

OLEUM OLIVÆ OPT.

Expressed in the U.S.A. from cotton-seeds and/or rape-seeds.

I do not deny that peach and/or apricot-kernel oil is an excellent thing; but I repudiate it as a synonym for English almond oil.

Yours truly,

J. C. McWALTER.

Irish Drug-contracts.

SIR,—The Irish Poor-law Unions are now taking their contracts. The form of tender is practically that of a "wholesale prices current." At the end of the list are some of Burroughs, Wellcome & Co.'s preparations, with their price-list attached. Contractors are invited to state what discount they will allow on their prices. The wholesale druggists offer as a rule from 10 to 15 per cent. discount, at least that is what was done last year. This year the "Apothecaries' Hall of Ireland"—a society with a Royal Charter, and composed of professional men, and claiming to be of equal standing with the Royal College of Physicians—have started the ball by offering a discount of 22½ per cent. to the Ballinasloe Board of Guardians, and have also offered to pay carriage on all orders. As Messrs. B. W. & Co. do not allow a bigger discount than 20 per cent. off their list we have the spectacle of professional men, medical men, so eager for trade that they offer to sell goods 2½ per cent. under cost price. In England the profession has not come down to this, but over here the above is what one meets with. I wonder is it "infamous conduct" from a professional point of view, and what the General Medical Council thinks of it.

Yours, &c.,

NOT A PROFESSIONAL MAN. (110/56.)

Dublin, March 21.

Dental Advertisements.

SIR,—The following old-time dental advertisement will doubtless interest your readers. It is from "The Celestial Atlas for the year of our Lord 1754, by Robert White, Teacher of the Mathematics at Grantham, in Lincolnshire":—

ADVERTISEMENT.

Artificial teeth set in so firm as to eat with them, and so exact as not to be distinguished from natural. They are not to be taken out at night as is by some falsely suggested, but may be worn years together; yet are they so fitted that they may be taken out by the Person who wears them at Pleasure, and are an Ornament to the Mouth, and greatly help the Speech. Also Teeth are cleaned and drawn by *Samuel Tutter* and *William Green*, Operators who apply themselves wholly to the said business, and live in *Racquet Court, Fleet Street, London*.

Another, from the *Times* of January 1, 1795, runs as follows:—

CHANGE OF RESIDENCE.

Mr. Dechemant, surgeon and dentist, royal patentee and inventor of the new mineral-paste teeth, which are incorruptible, without smell, and approved by the Society of Medicine, as well as by the Academy of Science of Paris, informs the public that he has taken, for the convenience of his profession, a large house, No. 1 Frith Street, Soho, where there is a double staircase and apartments conveniently arranged for those who desire to be seen. Mr. Dechemant may be consulted at home from 11 to 3 o'clock. He will give gratis a dissertation on the advantages of his new teeth in which are inserted the different approbations that his discovery has merited from the learned of Europe. The number of people he receives at home does not permit him to visit out of doors. As some persons have hitherto imagined that Mr. Dechemant has no other profession than that of making mineral-paste teeth, he begs leave to inform the public that he not only practises all that concerns the art of a dentist, but likewise in all diseases of the mouth, and with the greatest advantage, having practised both medicine and surgery before he made his present discovery.

The late Sir Edwin Saunders Saunders, F.R.C.S., who, like myself, was honoured by the Baltimore College of Dental Surgery with their honorary degree of Doctor of Dental Surgery, was evidently at one portion of his career a believer in the proverb of "Sweet are the uses of advertisement!" for we find that some years before he qualified M.R.C.S. he had issued a *brochure* in 1837, entitled "Advice on the Care of the Teeth," by Edwin Saunders, dentist, Fellow of the Medico-Botanical Society, author of "The Teeth a Test of Age," &c. This work had a lithographed frontispiece of a lady's bust, with a hinged flap, showing underneath the right labial surfaces of the superior and inferior maxilla. In a footnote to the preface Mr. Saunders stated "the author has been consulted by persons from all parts of the continents of Europe, from America, from the East and West Indies, and in more than one instance from China, who had become acquainted with him through this little work in those parts of the world." On the last page of this treatise Mr. Saunders finishes as follows:—

Casts and preparations of the cases referred to, and others, as well as models illustrative of the various methods of restoring lost teeth, I shall be happy to exhibit and explain to any persons who may feel interested in the subject. At home from 11 to 4. 16 Argyll Street. August, 1837.

This work on the teeth by Sir Edwin Saunders is a unique instance of a book with two distinct and separate title-pages. The first is lithographed and the second printed. I have not seen any work but this with two title-pages. It is also interesting to note that on the second title-page he describes himself "Lecturer on the Anatomy, Physiology, and Diseases of the Teeth." I have ascertained that this lectureship was conferred on Sir Edwin by St. Thomas's Hospital when in his 23rd year.

I am, &c.

CHAS. F. FORSHAW, LL.D., D.D.S.

Bradford, March 25.

"Officers."

SIR,—I was much interested in the article on "Nominating Councillors" in your last issue, and feel that you deserve thanks for looking up the old records and giving a synopsis of them. I must, however, join issue with the writer on matters of opinion as expressed in the article. In our communication to the Privy Council we stated that the present

method of appointing members of the Council was, equally with the method of nominating them, *ultra vires*. As our contention hinges on the use of the word "officers," I wish to put our view of the matter before your readers.

I have never seen any statement of the case on behalf of the Council of the Society, but I imagine you have said all that they can say, and that, therefore, in answering your contention I am meeting the whole case. You say—

First, however, it is desirable to dispose of the scepticism in regard to the members of the Council being "officers." The Charter itself shows that they are, for it says certain persons shall be the first members of the Council and shall continue such until the first meeting for the election of officers shall be held in pursuance of these presents. Further on, the Charter provides for the election of auditors and members of Council at the general meeting. This election is the only election provided for by Charter at the annual general meetings in May; therefore officers means auditors and members of Council. The only other meaning that can be attached to the word "officers" is salaried persons in the employment of the Society, and these are referred to in the Charter as "subordinate officers."

A good deal might be said on the absurdity of calling such a body as the Council "officers" of the Society—so contrary to all usage as to be simply ludicrous, and requiring ample, well-authorised evidence before it can be accepted. I have never put the clauses in the Acts of Parliament which have been taken as giving authority to alter the method of appointing the Council, and which have the formula "at which votes shall be given for the election of officers," and asked what they would understand by the word "officers," without invariably receiving as answer, "The paid officials of the Council, of course." Let us, however, not dwell on opinion, but get to the law and the testimony. I will begin by first dealing with the last clause in the part I have quoted, which, I suppose, will be regarded as the climax of the argument. I read in the Charter:—

(1) At line 252: That it shall be lawful for the Council to make by-laws for regulating the number and description of its officers.

(2) At line 254: And also for electing all subordinate servants, officers, and attendants as shall be deemed necessary.

The clause in the article I am dealing with says "all salaried persons are referred to in the Charter as 'subordinate officers.'" Who, then, are the "officers" referred to in extract (1)?* The members of Council and auditors? Nay, that cannot be, because their number and description are fixed by the Charter, and are not subject to regulation by the Council. It is evident that officers are a creation of the Charter, and that the Council have the appointing of them as well as the subordinate officers, and it could never have been intended that the Council should be described under the Charter-designation of their officials—officers. That this was not intended, the Charter in other parts and the official Acts both of the Council and the Society amply demonstrate. The Charter says:—

(a) At line 150, "to nominate and appoint the members of the Council . . . and five auditors." What says the rubric attached to this paragraph of the Charter? "Election of Council and auditors." Note the words "nominate" and "appoint" are jointly rendered "election," but the Council and auditors are not slumped into the word "officers" which doubtless would have been done had it been intended that they should be officially described by that term.

The further remark suggests itself here that the terms of the Charter were fresher in their minds when the Rubric was framed even than when the remark was made by Mr. Payne which you quote. It is not what was intended by an Act, but what the Act enacts, that those administering it have to consider. I will give other instances where, if the word "officers" was intended to mean Council and auditors, it could have been very appropriately used; and yet it never is:—

(b) At line 173: "That in the case of death, resignation, or removal of any member of the Council or auditor." At line 177: "To supply the place of such member of the Council or auditor."

* The officers of or appointed by the Council (*e.g.*, Secretary, Examiners, Editor, Professors, &c.); members of Council are officers of or appointed by members of the Society in annual general meeting as directed by the Charter and Acts of Parliament.—EDITOR.

At line 259: "To make by-laws for filling up of vacancies occurring among the . . . members of Council, auditors, &c."

The Charter thus consistently and persistently refers to them by their separate descriptive titles, and never calls them "officers." As to the Society and Council—

(c) The Council frame by-laws and the Society adopts them and gives them their sanction. If "officers" were the proper term by which to describe the members of Council and auditors, one would have expected Section 5 of the by-laws to be headed "Election of Officers," especially as the clause in the Act of Parliament under which the Council erroneously claims that it has the power to frame these by-laws uses the word. But no: the heading is "Election of Council and Auditors," and you are met with this other remarkable thing—that in Clauses 3, 4, 5, and 6 of that section the words "members of Council and auditors" are used.

(d) The official minutes of the Council, as they appear in the *P.J.* after the first meeting of the new Council, contain annually a paragraph headed "Reappointment of Officers," and detailing the appointment of the Secretary, Registrar, Editor, Librarian, &c. These are the officers sanctioned by the Charter at line 252 before quoted, and these are the only "officers" recognised in the Charter or by the Society; and it is impossible, therefore, to apply the term to the Council and auditors.*

Its use in their Acts of Parliament for auditors and Council makes the clause of no effect as regards them, as also the by-laws framed under it. Besides this, in dealing with Acts of Parliament you cannot jig about with designations, but must stick to the one authorised in the Act, so that, even if it could have been said that the word covered the Council, you would not have been entitled to make by-laws regulating the election under a different designation. Suppose the case was taken to court: then those who maintain that "officers" means the Council and auditors would have to maintain the following proposition:—"We have adopted a title for the Council which the Charter does not confer—from which, indeed, it debars them; yet perhaps the word 'officer' which we have taken might by a side-wind be stretched so as to almost reach them, and we ask you to decide that it does cover them." I do not think the issue of such a plea would be long in doubt.

It will be asked, no doubt, what view I take of the sentence "shall be the first members of Council . . . and continue such until the first general meeting for the election of 'officers.'" In reading the whole of the paragraph in which these words occur, it is to be noted that in both parts of it the President, Vice-President, and Treasurer are singled out and separated from the other members of the Council, and I regard the injunction as a clumsy way, perhaps, of saying that they were to continue in office between the date of the election of the new Council and the date of its meeting in June, when the new Council was re-constituted by the election of the President, Vice-President, and Treasurer, along with the Secretary and the other officers which they annually appoint, and that in terms of the Charter, lines 190-195. This is the only election of officers I can find in the Charter, and mine is the only explanation which seems consistent with the whole tenour of the Charter otherwise. The foregoing fully meets the whole case as put in the article, and renders it unnecessary for me to deal with the summing-up at the end of it.

One word, in conclusion, as to "Xraver's" remark that "Mr. Paterson and his friends do not intend to open the question of invalidating all past elections." If our contentions are right, then they invalidate themselves. In pointing out the position to the Council, I suggested that a clause should be inserted in the Bill they are promoting putting the matter right and containing a clause condoning any past irregularities. Had this been agreed to, we should have been quite satisfied, and have raised no bother about it. This the Council declined to do. We then thought the quietest way to raise the question was on the sanctioning of the by-laws by the Privy Council. These have, however, been withdrawn. The only course open to bring the matter to an issue is to have the election of the Council and auditors carried through in terms of the Charter. I think it is a duty members owe to the Society to see that the Council stands on a perfectly sound and legal basis, and

* "Impossible" is an inappropriate word to apply to what has been done for sixty years in deed and verity.—EDITOR.

that we are doing a service to the Society in making the position of it clear and indisputable. I have no doubt many members will help us in our efforts to this end.

Aberdeen, March 25.

JAMES PATERSON.

[For the fun of the thing, we hope so.—EDITOR]

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

112/66. *An Irish Boy*.—The qualifications in the United States Army Medical Corps are similar to those in this country. We have no particulars as to pay; but Mr. Geo. F. Payne, of Atlanta, Georgia, U.S., is interesting himself in the status of pharmacists in the U.S. Army, and would, we think, give you full information if you ask him; or you might apply to the U.S. Consulate, Dublin.

111/53. *W. J.*.—Menière's Disease, or auditory vertigo, is characterised by attacks of giddiness, noises in the ear, vomiting, and gradual loss of hearing. It is most common in men about the fortieth year, and rarely affects children. The attacks come on with great suddenness at irregular intervals, and without warning. There is ringing in the ears, the patient reels, and may fall; there may be loss of consciousness; the patient recovers in a few minutes, with vomiting, pallor, &c. Weeks may elapse between these attacks. The condition is generally due to disease of the labyrinth, but occasionally seems to be due to disease of brain centres. The external passages and the middle ear should be carefully examined to exclude peripheral causes. The treatment consists in tonics, to improve the general health: Bromides, in 20 gr. doses, three times a day; iodides in specific cases. Salicylates and large doses of quinine are also beneficial. Nitro-glycerin in gradually increasing doses is of value if the condition is associated with high arterial tension in old people. The prognosis is very uncertain. Many cases recover completely; others recover with deafness in the affected side. A proportion becomes progressively worse, the attacks increasing in frequency. There is no book published especially dealing with the disease, but it is generally referred to in books on ear-diseases. The reply given in the *C. & D.*, March 23, was not intended for you.

13/2. *F. F. C.*.—The seaweed is *Fucus vesiculosus*. It is burned for kelp, from which iodine is extracted. An extract of the weed is used as an anti-corpulency mixture. The plant is also used as a manure.

109/10. *J. A.*.—Blodlutsalt is Swedish for potassium ferrocyanide.

77/45. *Reg.*.—Linen-glosser.—This is generally either a tablet of hard paraffin, white wax, or a mixture of French chalk with wax or curd soap.

98/9. *Kensington.*.—Is not the title "Brompton lozenges" private property?

97/63. *Eton.*.—(1) The vegetable stain in alabaster will probably be deleted by laying upon it a paste of chlorinated lime. (2) *Bronzing Brass*:—

Iron oxide	...	...	...	...	3j.
White arsenic	...	...	...	...	3j.
Hydrochloric acid	...	...	...	...	3iss.

Apply to the cleaned brass with a brush till the desired colour is obtained.

95/26. *Vinum.*.—Gooseberry-wine.—Your brew has evidently developed the acetous fermentation. The only remedy is to neutralise with chalk, boil the liquid, and remake, using a fresh lot of sugar. The flavour of the wine will not, however, be so good after treatment as above.

95/12. *Gelatin.*.—Graph-composition.—See *C. & D.*, March 9, page 422.

93/4. *E. R.*.—Digestive-syrup:—

Tr. capsici	...	...	...	...	3j.
Ol. sassafras	...	...	...	...	℥x.
Spt. rectific.	...	...	...	...	3ij.
Ext. tarax. liq.	...	...	...	...	3x.
Dec. aloes co. conc. ad	...	...	...	...	3xx.

Dose: Fifteen to thirty drops in water.

100/45. *Urtica.*.—Syr. Hypophosph. Co.—See *C. & D.*, September 9, 1899, page 448. Emulsion of Cod-liver Oil with Hypophosphites.—See *C. & D.*, August 26, 1899, page 361; September 9, 1899, page 447, &c.

100/40. *Rheum.*.—We have never examined the gluten suppositories you refer to, so cannot suggest a formula.

100/8. *H. & S.*.—Arsenical Weed-killer:—

White arsenic	...	...	...	...	3ij.
Carbonate of soda	...	...	...	...	3iv.
Aniline water-blue	...	...	...	...	3j.
Water	...	...	...	...	Cong. j.

Boil the arsenic and soda in the water till dissolved, and add the dye previously dissolved in sufficient water.

104/58. *Catarrh.*.—We do not undertake analyses unless our correspondents give us reason to believe the results are likely to be of general interest.

57/53. *A. N. B.*; 80/33. *J. B. B.*.—We cannot give you the formulas for the hospital prescriptions, as neither of the hospitals has a pharmacopœia, and we can get no reply to our inquiries.

81/74. *J. B. S.*.—The drying oils you might use for oiling paper are poppy-seed oil, hempseed oil, cotton-seed oil, linseed oil, and wood oil. We could not say without experiment whether the oiled paper would become yellow with age.

74/32. *C. E.*.—Yellow Colour for culinary purposes. Tincture of saffron or annatto is the best to use. Turmeric and gamboge are not suitable for general use.

72/48. *Radix.*.—The chief use for quinol is as a developer in photography and in hair-dyes.

72/33. *O. K.*.—Mitchell Bruce's "Materia Medica and Therapeutics," 7s. 6d (Cassell), will suit you. A more ambitious work is Ringer's "Therapeutics."

30/36. *J. S. D.*.—There is no book published on the manufacture of essences for aerated water. Information on the subject is given in "Pharmaceutical Formulas," and in *THE CHEMISTS' AND DRUGGISTS' DIARY* for 1900.

82/17. *Velox.*.—(1) We suggest a little experimental research on your part to settle the liniment-query. (2) The weights and measures authorities would not verify such scales as you mention for dispensing-purposes. The most convenient scales for use at the dispensing-counter are Troemer's or a torsion-balance.

60/65. *Cremi Frig.*.—The sample of cold-cream does not contain lard. The base is a mixture of white soft paraffin and heavy petroleum oil. If you had given us particulars of the results you have obtained from your experiments, we might have been able to make some suggestions.

31/38. *H.*.—Hair-producing Pomade.—The cantharidine-pomade, a recipe for which is given in "Pharmaceutical Formulas," page 64, is about the best preparation of the kind.

Information Wanted.

Postcard replies to any of the subjoined inquiries will be esteemed.

111/31. Who supplies resin quite white?

1/1. *H. E. H.*.—Makers of Clement's tonic.

114/190. Where can Lecithine (made from eggs) be obtained?

Chemical Society.

AN ORDINARY MEETING

of the Fellows and friends of this Society was held at Burlington House on Thursday evening, March 21, when Professor Thorpe, C.B., F.R.S., presided. The attendance was moderate, but about a score of these present were more or less directly interested in pharmaceutical chemistry, which occupied most of the evening. Amongst the recently-elected Fellows who came up to sign the roll and shake hands with the President was Mr. E. F. Linstead, pharmaceutical chemist. The senior Secretary (Professor Dunstan) read a note of acknowledgment from the King's Private Secretary respecting the Society's address to his Majesty.

Dr. S. R. Schryver communicated a paper, from the Wellcome Chemical Research Laboratories, by himself and Mr. F. H. Lees, on

MORPHINE. *Conformation*

In a previous paper the authors related their attempts to obtain derivatives of the alkaloid which are not additive in the respect that codeine is to morphine, where the former molecule differs by CH_2 . Amongst other products they made bromomorphide (*i.e.*, morphine in which Br replaces OH), which yielded isomorphine, a non-narcotic isomer of morphine. The present paper dealt chiefly with this body. The authors have found that hydrolysis of bromomorphide really yields two isomorphines, the new, or beta, one being obtained in small quantity only. It differs from the other in melting-point and other physical characteristics. Isomorphine was attacked with the view to finding its constitution especially to prove the conjecture of the previous paper that the isomer, or rather isomorphine methyldioxide, is a phenol betaine. This was successfully established, also that the isomorphine molecule contains (1) two OH groups, (2) one of which is phenolic, and (3) that it contains the morpholin ring. These three are also characteristic of morphine. Codeine yields isocodeine, analogous with morphine and isomorphine, and the methiodide of isocodeine on treatment with sodium hydrate yields methi-isomorphimethine, the methyldioxide of which yields morphinol methyl ether, $\text{C}_{11}\text{H}_{16}\text{O}_2$, which fact indicates that the original alkaloid contains the phenanthrene ring, as Knorr has already stated. The authors endeavoured to work these facts into a feasible constitutional formula, and this, contrasted with Knorr's one for morphine, suggests that isomorphine is almost the reverse of morphine, but with the acetyl and methyl groups attached to the bottom ring, whereas in morphine they link the top and bottom rings. This may account for the difference in the optical activity, but does this account for the difference in the physiological activity of the bodies? This has to be determined.

Another Wellcome laboratory communication followed in Part II. of the research on

THE CONSTITUTION OF PILOCARPINE

by Dr. H. A. D. Jowett. He first described the bromine derivatives of isopilocarpine. The dibromo compound, on oxidation with permanganate, yields, as the author previously stated, an acid $\text{C}_8\text{H}_{10}\text{O}_4$, now called pilopic acid, besides hydrobromic acid, ammonia, and methylamine, and now he has found another acid in small quantity; it is $\text{C}_8\text{H}_{11}\text{O}_4\text{N}$, or pilopinic acid, and yields pilopic acid and ammonia when oxidised. Dr. Jowett also described the formation of these acids and mono- and di-bromo-isopilocarpinic acids, when the base is heated with bromine in a sealed tube at 100°C . The dibromo acid ($\text{C}_{11}\text{H}_{17}\text{O}_4\text{N}_2\text{Br}_2$) yields a lactone on replacing Br with H, the properties of which were described. Dr. Jowett finds that Pinner and Kohlhammer were wrong in saying that dibromo-pilocarpine melts at 79°C . He gives 95°C . as the correct figure, and also stated that he has failed to obtain by the method of these authors bromocarpinic acid.

Specimens of the new crystalline products were exhibited. Neither of the foregoing papers elicited any discussion. The next one was on

FERMENTATION BY BACILLI.

It was by Dr. A. Harden, of the Jenner Institute, and proved to be intensely interesting. Bacteriologists are now endeavouring to determine by chemical means what kind of

bacilli exist in any media, and the products of fermentation of sugars seemed to Dr. Harden to be worth investigating. With *B. coli communis*, grown in a nutrient medium containing glucose, the fermentation or growth being continued for three weeks, by which time all the bacilli were dead, he obtained the following products:—

Lactic acid	... 40 to 50 per cent.	= 2 to 3 carbon atoms
Acetic acid	... 12 to 19 per cent.	= 1 carbon atom
Alcohol	... 9 to 16 per cent.	= 1 carbon atom
Succinic acid	... 5 per cent.	= 0.3 to 0.4 carbon atom
CO_2	... 12 to 18 per cent.	= 0.6 to 1 carbon atom

The percentage refers to the sugar used up, and the author suggested that two molecules are involved in the action, or that two reactions go on at once. The bacillus of typhoid gives the first four products and 17 per cent. of formic acid, so that it is easy to distinguish between the two, although some abnormal forms of *B. c. c.* act similarly. The actions of the bacilli on other sugars and on mannite and glycerin were also referred to, and the author showed the bearing of his results upon such phenomena as the souring of milk and the formation of lactic acid in the digestive organs.

In the discussion, Dr. Wynne, editor of the Society's *Journal*, suggested (in reference to Dr. Harden's idea of two molecules of sugar being involved in the reaction) that Bayer's theory of two or more enzymes being at work would explain it. Mr. Pakes, whose recent work on the same subject is familiar to the Society, stated that he had spotted 125 varieties of *B. c. c.*, and he spoke at considerable length in a commendo-critical manner of the paper. Mr. Chapman threw in the inevitable joke about arsenic in the glucose, and Dr. Harden replied, stating that he had tried to isolate the enzymes, but had failed.

AN EXODUS

was the next feature, and it happened when the President called upon Dr. Lander to read his paper on "Action of Dry Silver Oxide and Ethyl Iodide on Benzoyl-acetic Ester, Deoxybenzoin, and Benzyl Cyanide." The author also read one on the "Alkylation of Acylarylamines."

ANNIVERSARY DINNER.

TAKING a leaf out of the Pharmaceutical Society's book, the Fellows of the Society dined together on the eve (Wednesday, March 27) of the anniversary dinner, which was served in the Whitehall Room of the Hôtel Métropole, London. Professor Thorpe presided, and was supported on the right by the Lord Chancellor, Lord Kelvin, the Rev. Professor Fowler (Vice-Chancellor of the University of Oxford), Sir Herb rt Maxwell, M.P., and other distinguished guests. On the left sat Professor Emerson Reynolds, Sir Francis Mowatt, K.C.B. (Secretary to the Treasury), Sir W. S. Church, M.D., Sir W. L. Threlson Dyer, and Sir Henry Roscoe. Professor Meldola, Professor Dunstan, Professor Tilden, Dr. Scott, and Dr. Wynne were chairmen of the spur tables. The company numbered 135, and the pharmacists we noticed present were Mr. Michael Carteighe, Mr. J. Epps, Mr. E. F. Harrison, Mr. C. A. Hill, Mr. W. L. Howie, Dr. Luxmoore, Mr. Peter MacEwan, Mr. W. Martindale, Dr. Frederick Power, and Mr. J. W. Swan, F.R.S. Grace in Latin was recited before and after meat by the Vice-Chancellor of the University of Oxford. The speaking began about ten minutes to 9, and lasted without interruption for two hours, in the course of which fifteen speeches were delivered. The President, in giving the toast of "The King," spoke with rare grace and eloquence; as courteously was his speech proposing the second of the loyal toasts.

Professor Tilden submitted the toast of "The Houses of Legislature" in a long speech which was practically an appeal to the Legislature to give greater recognition to science, and to pay more attention to the art of observation.

The Lord Chancellor's first words in response to the toast were a delicate allusion to the length of Dr. Tilden's speech. In the House of Lords they were not unfamiliar, he said, with the process through which the Treasurer had just passed, but he did not think they went so far in quantitative and qualitative analysis. (Laughter.) He observed that his friends in the House of Commons had that day distinguished themselves in their energy to procure pure

beer. Why, he asked, should they not have it chemically pure? (Laughter.) He was not unmindful of the exhortation which he had received that parliaments should never forget what the nation owes to science. He had heard it whispered—he would not say by unkind friends—that their work in manufacturing Acts of Parliament was not absolutely perfect, and he confessed part of his business was to interpret what the Legislature had said; but the more they advanced in the science of language, in perfecting precision, in organising human thought and reasoning, the plainer they would make to the popular understanding the meaning of an Act of Parliament.

Sir Herbert Maxwell responded for the House of Commons.

Lord Kelvin then delighted the company with one of his quaint speeches, sparkling here and there with wit, and the evidence of wide knowledge and intellectual power. His toast was "Prosperity to the Chemical Society," and his subject the relations between chemistry and "good old natural philosophy." It was in 1843, he said, that he had delivered his first lecture on the latter subject to his first class of students at Glasgow, and when they wanted to know anything about chemistry he had to refer his students to the other professors round the corner. Yet he claimed close intimacy between chemistry and physics as branches of dynamics, and gave his audience a few examples of the subtleties of matters from the region of his speculations as to its origin, and from his experience as Chairman of the Arsenic Commission, harking back now and then to Glasgow and some of its quaint men who have been great chemists, such as Thomas Graham (first President of the Society), and Thomas Thomson, and reminded the meeting that the Chairman had been professor of chemistry at the Andersonian Institute, Glasgow.

Professor Thorpe in the course of his reply mentioned that this year is the diamond jubilee of the Society.

Professor Dewar in proposing "The Learned and Scientific Societies," deplored that nowadays there is undue exaggeration of personality in scientific research.

Mr. Kempe, treasurer of the Royal Society, and Professor Silvanus Thompson replied, and after the guests were toasted on the initiation of Professor Emerson Reynolds, Sir Henry Roscoe gave the health of the retiring President, saying that Professor Thorpe is one of the cleverest chemists he has known.

The President in replying said, "All that I am as a chemist I owe to one man—Sir Henry Roscoe."

THE ANNUAL MEETING

took place on March 28 when about forty members were present. The President (Dr. Thorpe) in his address referred to the death of Queen Victoria and the address which the Society had presented to the King. The fellows of the Society total 2,368 of which 33 are foreign members. There have been 117 new fellows elected during the past year. Reference was made to the losses which the Society had sustained by death, the President giving short biographical sketches of Sir John Conroy, Sir John Bennett Lawes, Dr. Stevenson Macadam, Richard Reynolds, Edmund Atkins, Professor Saville Shaw, and Lieutenant Ellis. Mr. Reynolds, he said, deserved to be held in remembrance, not only as a pharmacist, but as a type of a good citizen. He was one of the founders of the British Pharmaceutical Conference, and had a large share in the initiation of the Yorkshire College. The Council have decided to provisionally make the hour of meeting 5.30 on the first and third Wednesdays of each month. This was the outcome of the recent ballot taken of the Fellows. Mention was made of the fact that Dr. Russell, Mr. N. S. Maskelyne, Sir David Gamble, and Mr. E. Riley each attain the jubilee of their connection with the Society this year. The communications to the Society during the year were 118, a larger number than in any previous year.

Dr. Armstrong proposed a vote of thanks to the President, who would now have more time, he said, to produce those fascinating novels of his on such subjects as matches, lead poisoning, and, he supposed, arsenical beer. The new hour of meeting would be, he thought, an inconvenient one for the younger members. Professor Smithells seconded the motion, which was carried. Votes of thanks were given to the officers of the Society, after which the results of the election were declared. Dr. J. Emerson Reynolds is the new President.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: March 28.

BUSINESS during the last week of the quarter has, if anything, been duller than usual, and no alterations of consequence were reported previous to the drug-auctions. Quinine has received little support in the second-hand market, buyers waiting the result of the Amsterdam bark-sales, reported on page 540. Expressed oil of almonds is 1d. lower; American HGH oil of peppermint is firmer. Opium and galls are easier, while fine druggists' grades of tragacanth are scarce and higher. Cod-liver oil is gradually rising, but there is little demand. The following are the principal changes of the week, including those recorded at the drug-auctions:—

Higher	Firmer	Easier	Lower
Camphor (ref.)	Benzoin	Ammonia sulphate	Cascarilla
Cinchona	Oil, peppermint HGH	Buchu	Oil, almond
Copaiba	Tragacanth (fine)	Copper sulphate	Quinine (sec. hands)
Elemi		Ergot	
Ginger (Jam.)		Ipecac. (Cart.)	
Wax, bees' (Jam.)		Galls (Pers.)	
		Opium	
		Pepper (Sing. black)	
		Potashes	

Arrivals.

The following drugs, &c., have arrived at the principal ports of the United Kingdom from March 21 to 27 (both days inclusive).—Acid, carbolic (@ Cologne), 50; acetanilide, 10 cks. 2 cs.; aloes (Socotrine), 14 cs.; anise (@ Hong-Kong), 300; anise oil (star), 10; argol (Cape), 24; arrowroot (W.I.), 12; bismuth (@ Townsville), 2; buchu, 18; camphor (@ Kobe), 1,500 pkgs.; cardamoms, 243; caraway seed, 50; chillies (@ Kobe), 691; chiretta @ Calcutta), 46; cinchona, (@ Amsterdam) 44, (@ Paris) 317 bales 27 serons, (@ Colombo) 368; cochineal, 10; cod-liver oil (@ Norway), 437 pkgs.; coca-leaves (@ Valparaiso), 54 lbs.; cocoa-butter, 34; cream of tartar, (@ Bordeaux) 43, (@ Rotterdam) 10; drugs, (@ Valparaiso) 49 bgs., (@ Marseilles) 15 bl.; galls (Chin.), 200; ginger (@ Hong-Kong), 1,927; gum arabic, (@ Aden) 60 bgs., (@ Alexandria) 90 pkgs.; gum thus, 400; honey, (@ Hamburg) 50 cks., Chil.) 83, (@ Havre) 65; insect powder @ Trieste), 110 brls.; juniper-berries, 200; lime citrate @ Messina), 55; liquorice @ Messina), 48; menthol (@ Yokohama), 10; musk, (@ Calcutta) 1 cs. 1 box, (@ Colombo) 1 box; oil, castor (Ital.), 33 cs.; oils, essential, @ Messina) 134 pkgs., (@ New York) 59 cs.; peppermint oil Jap.), 25 cs.; potash chlorate (Swed.), 75; quicksilver (@ Huelva), 3,001; roots (@ Kobe), 94; senna (@ Suez), 51; soy, 80; tamarinds, (W.I.) 50, (E.I.) 134; wax, bees' (Span.) 31, (E.I.) 76, (Ital.) 5; wax, carnauba (@ Maranhão), 169; wax, Japanese, 150.

Competition in Quinine Pills.

The *Sourabaya Courant* states that the united German quinine-factories propose shortly to commence the sale of quinine pills in all the principal towns in Java, at prices based upon those paid for Bandong quinine at the Batavia auctions. This would doubtless result in a loss to the German works; but it is thought that it will have the effect of forcing the Bandong factory to discontinue the manufacture and sale of quinine pills, from which they derive a considerable income. The Java paper mentions this as a danger threatening not only the Bandong factory, but

also indirectly the cinchona-planters, and it exhorts the latter to persevere in the co-operation which has led to the present favourable state of the local quinine-industry.

Java Government Cinchona.

The report on the Government cinchona plantations in Java for the quarter ending December 31, 1900, states that the young plants are in excellent condition, and are developing strongly. This is due not only to the favourable weather during the period under review, but also to the fact that only healthy and large plants have been used for planting out. The plantations are free from disease and insect-pests, with the exception of those in the western part of Tirtasari, which are somewhat seriously affected. Contrary to recent experience, there has been a great lack of labourers, a fact which is also felt in private tea and cinchona plantations. By the end of December practically the whole output had been shipped, partly to Tandjong Priok (for export) and partly to the Bandung quinine-factory. The whole yield of bark in 1900 came to about 560 tons; of this quantity 378 tons were exported to Holland, and 182 tons worked up at Bandung.

At the auctions of cinchona-seed some specimens fetched as much as 46l. per packet of 25 grammes; shoots for grafting were sold at 16s. 8d. each.

Indian Cardamoms.

Mr. J. W. Mollison, Deputy-Director of Agriculture, Poona, states, in a report on cardamoms in India, that in most of the Kanara gardens a so-called disease has appeared in the cardamom crops, and is restricting cultivation. The affected plants do not present any particular indications of disease, but simply do not thrive. The leaves in parts become yellow and wither. The effect is that the plants have no vigour of growth. It may be taken as certain that the cardamom, like any other cultivated plant, degenerates when grown for long periods under precisely the same conditions of soil and climate and without any change in methods of propagation or reproduction. The vigour of any cultivated plant may be renewed from time to time by change of soil, change of seed, by rotation of crops, and by other regenerating influences. The Kanara cardamom crops have for a long period been grown without any changes in the system of manuring, propagation, and general cultivation, and Mr. Mollison is of opinion that the diseased conditions referred to have been induced by these causes.

Havre Terminal-markets.

The "terminal" or "option" business in colonial produce, such as pepper, indigo, coffee, cotton, wool, &c., which is carried on at Havre to a very large extent, is threatened by hostile legislation in the French Parliament, which may seriously interfere with transactions of this nature and may possibly stop them altogether. The Havre Exchange was the first in Europe to organise and regulate this "terminal" business, and to perfect the system whereby all transactions were registered by the Clearing-house (Caisse de Liquidation). Other markets such as Antwerp, Rotterdam, Hamburg, and London, followed on similar lines. Of late months, however, serious disaster has overtaken various manufacturers through the speculations of others. Reports of these troubles found their way into the press and into Parliament, and the result has been an outcry against all "option" trading, and the introduction into Parliament of a Bill, the ostensible purpose of which is to regulate all terminal trading. This Bill has been for some time before the Committee of the Chamber, which has accepted the general principle of State supervision of "option" business, but has not yet come to a decision upon the details of the measure. The proposed legislation is vigorously opposed by the Chamber of Commerce and other public bodies.

Heavy Chemicals.

The quiet tone lately ruling in the heavy-chemical market still continues, and demand from home consumers particularly shows a considerable falling-off. Inquiries for export and early shipment are very fair, and it is pleasing to be able to report that this branch of the trade is improving somewhat. As regards values, there is little of special note to be recorded. Sulphate of copper and borax, however, are distinctly on the easy side.

ALKALI-PRODUCE.—The condition of business all round shows very little change. Bleaching-powder is meeting with more inquiry than it has been doing of late, and is also moving off better. Quotations are 6l. 17s. 6d. to 7l. 2s. 6d. for softwood casks on rail, and 7l. to 7l. 5s. per ton f.o.b. Tyne or Liverpool. Caustic soda, which has also been quieter for some time, is again in heavier demand; 76 to 77 per cent., 11l. to 11l. 5s. per ton; 70 per cent., 10l. 5s. to 10l. 7s. 6d. per ton; and 60 per cent., 9l. 5s. to 9l. 7s. 6d. per ton. Ammonia alkali keeps very firm, and is in strong demand at 4l. 17s. 6d. to 5l. 2s. 6d. per ton, free on rails at works. Soda crystals, too, are moving well, and prices are steadily maintained at 67s. 6d. per ton f.o.b. Liverpool, and 62s. 6d. to 65s. per ton f.o.b. Tyne. Saltcake has fully maintained its position, and, if

anything, is somewhat firmer at 30s. per ton free on rails in bulk. Bicarbonate is ruling firm, owing to brisk demand and scarcity; 6l. 7s. 6d. to 6l. 12s. 6d. per ton f.o.b. Liverpool in 5-cwt. casks, and 6l. 15s. to 7l. per ton for 1-cwt. kegs. Hyposulphite of soda is somewhat lower, but continues to move steadily at 6l. 10s. to 7l. per ton for 4-cwt. casks, and 7l. 5s. to 7l. 15s. per ton in 1 cwt. kegs. Chlorates of potash and soda are very quiet, and values keep on the easy side. Chlorate of potash crystals, 3½d. to 3¾d. per lb. f.o.b. Liverpool, and soda, 3½d. to 4½d. per lb. Yellow prussiate of potash, too, is very quiet, with declining tendency; best Lancashire makes, 6d. to 6½d. per lb. Sodium sulphate (glaubers salts) steady at 30s. to 32s. 6d. per ton in bags free on rails. Silicates of soda stand at unchanged rates, and are in continued steady request; 140° TW, 4l. 2s. 6d. to 4l. 12s. 6d. per ton; 100° TW, 3l. 12s. 6d. to 4l. 2s. 6d. per ton; and 75° TW, 3l. 5s. to 3l. 15s. per ton in usual casks f.o.b. Tyne or Liverpool, with customary differences for other packages. Silicate of potash, 7l. 15s. to 8l. per ton for solution, and 17l. to 17l. 5s. per ton for lump.

Liverpool Drug Market

Liverpool, March 28.

CASTOR OIL.—Good seconds Calcutta maintains its firm position, and 4½d. per lb. has been paid for the small stocks available. To arrive by the *Logician* at the end of the month 4d. is being freely paid, and some holders are talking of more money. First pressure French is steady at 3¾d. to 3½d. per lb., sales being made at both prices; Second pressure is still firmly held at 3½d. First-pressure English remains unchanged at 3¾d. to 3½d. per lb.

LINSEED continues to advance, and ordinary grades are quite 5s. per qr. up since last week's report. The oil is dearer in sympathy.

TURPS.—Steady, at 27s. 6d. per cwt., though some talk of 27s. 9d.

QUILLATA.—A parcel of 86 bales just arrived is offered from the quay at a shade under current quotation, which is 13l. 10s. per ton.

ARSENIC.—Powdered white is lower, at 17l. per ton, net.

HONEY.—Few transactions have taken place during the week, but a small parcel of pile 1 Chilean has changed hands at 23s. per cwt. Pile X is held for 32s. 6d. to 33s. 6d.; pile 2, 25s. 6d.; pile 3, 24s. to 24s. 6d. per cwt. One hundred and twenty cases Californian have been sold at 42s. 6d. to 43s.

GINGER (AFRICAN).—Sales of the new have been made from the quay at 28s. 6d. per cwt., but it is expected that prices will recover again shortly.

BEESEWAX.—Small sales of Gambia have been made at 7l. 10s. per cwt., and 10 cases E.I. were sold on private terms. Chilean is moving off very slowly, but holders are firm, at 7l. 7s. 6d. to 7l. 10s. per cwt. for grey to yellow.

COCHINEAL.—Sixpence per lb. has been paid for 25 bags ordinary grey Teneriffe, and black has been selling at 8d. to 8½d. per lb. There were no bids for one parcel at auction.

GRAINS OF PARADISE continue to advance, and 100s. per cwt. has been paid for a small parcel.

CHILLIES (SIERRA LEONE).—Fifty bags more of the new crop have arrived, and 50s. per cwt. is asked by importers.

COPAIBA.—Three barrels Maranham cloudy offered at auction, and after spirited competition were sold at 2s. 2½d. per lb.

WAX CARNAUBA.—Recent values are maintained; 55 bags dark to fair ordinary Maranham have changed hands at 43s. to 44s. 6d. per cwt., and a small business has been done in irregular to good fair yellow at 57s. 6d. to 63s., and 72s. 6d. for a small lot of prime.

JABORANDI.—There has been a little inquiry, but no business so far, owing to the prices asked.

German Drug Market.

Hamburg, March 26.

The drug-business is still quiet here, and without animation. Prices have undergone little change since last week.

AGAR AGAR is quoted 390m. spot; and forward 395m. to 390m. per 100 kilos.

ALOES, CAPE, is unchanged but firm at 56m. per 100 kilos.

CAMPHOR (REFINED) is in very small demand at present, with second-hand sellers at 455m. per 100 kilos.

CITRIC ACID keeps very firm at 370m. per 100 kilos.

CASCARA SAGRADA is quiet and lower at 43m. per 100 kilos.

CONDURANGO is about unchanged at 90m. to 95m. per 100 kilos.

CUMIN-SEED is also unchanged at 63m. to 64m. per 100 kilos. for Maltese.

ERGOT OF RYE is dull and lower; Russian is quoted 435m. per 100 kilos.

KOLA is steady at 45m. per 100 kilos.

LYCOPodium is unchanged, but firm, at 430m. per 100 kilos.

MENTHOL is also unchanged at 28½m. to 29m. per kilo.

QUININE is lifeless at 45m. per kilo.

CORIANDER-SEED (MOGADOR) is a shade easier at 25m. to 26m. per 100 kilos.

IPÊCACUANHA, RIO, remains firm at 28m. per kilo.; and Cartagena is quieter at 16½m. per kilo.

STAR ANISE is steady at 125m. per 100 kilos. for spot delivery, which figure has been paid.

CARNAUBA WAX shows a quiet market at from 89m. to 140m. per 100 kilos., according to quality.

JAPANESE WAX is tending firmer at 62m. per 100 kilos.

COD LIVER OIL is unchanged. New non-congealing oil is quoted 70m. per barrel.

LINSEED OIL AND COTTONSEED OIL both show a considerable advance.

CASTOR OIL is getting scarce owing to the strike in Marseilles; for first-pressing in barrels 63m. per 100 kilos. has been paid on the spot.

STAR-ANISE OIL is quoted 12½m. per kilo. and paid.

PEPPERMINT OIL is firmer; HGH is quoted to-day at 5.70m. per lb.; and Japanese oil is also firmer at 8m. per kilo.

American Drug Market.

New York, March 19

Business continues liberal in volume and the market has a firm tone.

ALOE.—Recent arrivals of Curacao have not affected the market, which remains steady at 4c. to 4½c. per lb.

ASAETIDA.—Good quality gum sells readily at 30c. to 40c., and the market is bare of supplies below 25c. per lb.

BALSAM COPAIBA.—Central American is moving steadily at 38c. to 40c. Para is firm at 47½c. to 50c.

BUCHU-LEAVES are stronger. Sales of fine green leaves have been made at 28c. to 30c., and only limited amounts are now available. Quotations show a further advance to 32c. Yellow leaves are obtainable down to 25c.

CINCHONINE is in good demand, and manufacturers have advanced quotations to 30c. for bulk. Supplies in second-hands are very small.

COD-LIVER OIL.—Holders are anxious to sell, and quotations are easy at \$22.00 to \$24.00.

GOLDEN SEAL (HYDRASTIS) is in light demand and easier at 54c. Supplies from primary sources are offered at 51c.

CASCARILLA-BARK.—The market is almost bare of supplies and quotations are nominal. Quills are offered at 12c. in small quantities.

JALAP.—Arrivals have weakened the market, and 12½c. will buy good quality root.

PEPPERMINT OIL is active and quotations for Western oil are firm at \$1.10 per lb. There is considerable speculative inquiry, but few heavy sales.

QUININE has advanced to 32c., and manufacturers are offering sparingly.

OPIMUM is selling in case-lots at \$3.25, but demand is very poor.

MANNA.—Large flake is very scarce, and quotations of \$1.20 are nominal. Small flake is higher at 60c., and sorts firm at 38c. to 42c.

SENEGA is an easy market, and sales have been made down to 35½c.

CUBE BERRIES have sold at 9c., but the market is advancing, and 10c. to 12c. is the general quotation. Supplies are concentrated, and holders offer sparingly in anticipation of further advances.

Cablegrams.

HAMBURG, March 28, 2.5 P.M.:—Refined camphor has been advanced 5m. per 100 kilos. Condurango is firmer. Ergot is quiet, at 42½m. per 100 kilos.; and star-anise at 124m.

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SMYRNA, March 28, 11 A.M.:—The firm tone of the market in opium is being well maintained. Sales of 30 cases (tale-qualle) are recorded at prices ranging from 8s. 6d. to 9s. per lb., f.o.b.

* * *

NEW YORK, March 28, 3.26 P.M.:—Business here is quiet. Opium is dull, at \$3.20 per lb. Rio ipêcacuanha is quiet, at \$2.95 per lb. Buchu-leaves have been advanced to 30c. per lb. Citric acid is higher, at 43c. per lb.; and cubebs are advancing, 13c. having been paid. Ergot is easier, at 53c. per lb.; and senega is lower, at 35c. Golden seal is also easier, at 53c. per lb.

* * *

BERGEN, March 28, 2.30 P.M.:—The cod-fishing remains unsatisfactory. The total catch up to date amounts to 16,990,000, against 13,400,000 for the corresponding period of last year. This is expected to yield 16,730 barrels of unrefined oil, as against 13,721 last year. The Bergen market is a trifle easier, but the quotation is practically unchanged at 68s. per barrel, f.o.b.

AMSTERDAM, March 28, 4.35 P.M.:—The auctions of cinchona-bark held here to-day consisted of 6,614 bales and 218 cases, weighing 624,980 kilos., and containing 31,447 kilos. (1,100,645 oz.) quinine sulphate. The manufacturing-bark contained an average percentage of 5.58 per cent., against 5.24 per cent. for the February auctions, and an average of 5.26 per cent. for the ten Amsterdam auctions of 1900. Of the above quantity 6,203 packages sold at an average unit of 8.95c. per half-kilo., against 7.50c. paid at the February auctions. The following were the approximate quantities of quinine purchased by the principal buyers:—English and American factories, who purchased the equivalent of 9,892 kilos.; the Brunswick factory, 5,070 kilos.; the Mannheim and Amsterdam factories, 5,483 kilos.; the Frankfort-on-Main and Stuttgart factories, 4,457 kilos.; and various buyers, 2,962 kilos. The prices paid for the manufacturing-bark ranged from 12½c. to 83c. per half-kilo., and druggists' bark from 12c. to 70c. The tone was firm.

London Markets.

ACONITE.—German Napellus still keeps very scarce, 48s. per cwt., c.i.f., being quoted by one holder.

ARROWROOT at auction on Wednesday partly sold at 1¼d. per lb. for good St. Vincents, and at 2½d. in half-barrels.

ASAETIDA.—The market has been cleared of the best lots of medium qualities at from 60s. to 64s. per cwt. An arrival of 70 boxes is shortly expected, per ss. *Afghanistan*.

BELLADONNA-ROOT.—Fair quality is quoted 40s. per cwt., c.i.f.

BISMUTH.—Makers report a good demand for the principal salts at last week's reduction. The export business is chiefly for the South African market, where enteric fever shows little abatement.

CANTHARIDES.—Slow of sale. Natural Russian flies have been reduced to 2s. 4d. per lb., c.i.f., and Chinese are quoted 1s. 11½d., c.i.f.

CASCARA SAGRADA.—Business has been done at a further advance, two-year-old bark having sold at 28s. 6d. to 29s. per cwt., spot. Temporary scarcity on this market is responsible for the advance. To arrive, 25s., c.i.f., is quoted.

CINCHONA.—The N. V. Vriesscheem cinchona-bark department at Amsterdam report the shipments from Java to Europe from January 18 to March 24 at 1,083,000 Amst. lbs., and the total from January 1 to March 24 at 2,073,825 Amst. lbs. The above figures do not tally with those of the Nederlandsche Veem monthly shipments, and are thought by many not to be correct. At the drug-auctions 11 bales of good bright flat broken Calisaya sold at 1s. for sound and 11½d. to 11¾d. for damaged. One seron of broken Loxa quill sold at 1s. 2d., and 4 serons of Huanoco ditto at 6¾d. per lb.

COCOA BUTTER.—The auction to be held at Amsterdam on April 9 will consist of 90 tons Van Houten's, 5 tons Helm. 8 tons De Jong, and 5 tons Mignon, while on April 2, 100 tons Cadbury's will be offered in London.

COLCHICUM SEED is now almost unobtainable on the London and Hamburg markets, stocks having been purchased for American account.

COLOCYNTH.—The exports from Cyprus for 1899 amounted to 105 cwt. (383½) against 56 cwt. (250½) in 1898.

GALLS.—Persian are easier, small sales of blues having been made at 57s. 6d. per cwt. spot; greens are quoted 50s., and whites 45s. nominally.

GENTIAN is quoted 14s. to 15s. per cwt. c.i.f. according to quality.

GINGER.—A Colonial Office report on the trade of Jamaica for 1899-1900 states that the exports amounted to 20,205 cwt. (60,615½), against 15,197 cwt. (43,374½) in 1898-1899. Most of the ginger was exported to the U.K. and U.S.A. in the proportion of about two to one.

GUM ARABIC.—The demand for so-called Persian insoluble sorts is slow; good blocky unworked has sold at 15s. per cwt. Good sorts offer at 17s. to 18s. 6d., and pale selected 20s. to 23s. 6d. In the drug-auction 11 bags of pale Aden sorts sold at 41s., and 23s. was refused for pale siftings.

MERCURIC CHLORIDE has been in active demand for export, and considerable quantities have recently been shipped to Bombay and the Cape on account of the plague. Supplies for prompt shipment are now practically unobtainable, and some makers are unable to execute further orders under a fortnight. For urgent requirements a slight premium over the quoted prices has been paid.

OIL, ALMOND.—English pressers have reduced their quotations by 1d per lb., and now quote sweet at 1s. 10d., and pallid 2s. Competition on the part of foreign makers is responsible for the reduction.

OIL, CITRONELLA.—Business has been done for arrival at 9½d. per lb., c.i.f., in drums.

OIL, COD-LIVER.—There is no improvement in the demand, although agents' quotations are gradually advancing; the lowest quotation is now 70s. per barrel, c.i.f., and upwards. The tendency of the Bergen market, according to advices from our correspondent on March 23, is still very firm, at 68s. per barrel, f.o.b. Bergen, for non-freezing oil. The catch still continues extremely poor, which is the more to be regretted as about Easter the fishing is supposed to be at its best. The exports from Bergen to date amount to 2,069 barrels, against 1,484 barrels at the same time last year.

OIL, PEPPERMINT.—Demand has improved this week. American HGH is firmer, 6s. per lb. having been paid for spot parcels; and for genuine Wayne County business has been done at 5s. spot.

OPIUM.—The London market has still a downward tendency. Fine "druggists'" opium is obtainable at 9s. per lb., and fine Persian at 13s.

CONSTANTINOPLE, March 23.—Notwithstanding the decline in Smyrna, holders here are firm, and show no disposition to sell. If rain does not fall in the course of a few days we expect a much firmer market. There are no sales to report, and prices asked for "druggists'" to day are 8s. 7d. to 8s. 9d. per lb., f.o.b.

POTASHES are slightly easier at 29s. to 29s. 6d. per cwt., and 34s. for pearl.

QUININE.—The market has been very quiet this week, and prices are easier again in second-hands. After being firmer in the early part of the week, the spot price has declined to 1s. 3d., with a small business thereat. August delivery has sold at 1s. 3½d. to 1s. 3¾d. per oz. Buyers generally are waiting the result of the Amsterdam bark-sales to-day, at which the quantity offered was larger than anticipated. It will also be noted that the average percentage of quinine in the manufacturing-bark has improved on this occasion.

The exports from Java for October, 1900, amounted to 214 cases, of which 152 cases were shipped to the United Kingdom and the remainder to New York. From July 1 to October 31, 1900, the shipments were 1,039 cases, against 562 cases and 499 cases for the like period of 1899 and 1898.

SEEDS.—Anise is still quoted 18s. per cwt. on the spot and 17s. c.i.f. terms for Russian. Malta *Cumin* is selling at 24s. 6d. to 38s. per cwt., according to quality. A fair trade is passing in Morocco *Coriander*, at 12s. to 12s. 6d. per cwt. Fine bold *Linsed* has been sold at 55s. per quarter. More demand for *Fenugreek*, with large sales at 6s. to 6s. 6d. per cwt. *Canary* continues slow of sale, but quotations are unaltered.

SPICES.—A quiet tone still prevails. At auction on Wednesday Calicut brown rough *Ginger* was bought in at 35s. per cwt. A parcel of Japan was bought in at 32s. Jamaica sold with good competition at about 2s. per cwt. above late rates; common to ordinary at 35s. to 38s. 6d., fair to good washed, 41s. 6d. to 50s., and bold at 55s. to 60s. per cwt. Zanzibar *Cloves* are steady at 4½d. per lb. for March-May delivery. Penang sold cheaply at 5½d. to 5¾d. per lb. for fair, and at 6½d. to 7d. for good bright. *Pimento* continues dull; only a few bags sold at 2½d. to 2½d. per lb. for common to ordinary. Fine red Egyptian *Capsicums* sold at 58s., and bright red East India cherries at 28s. to 29s. 6d. per cwt. *Cinnamon* was bought in at 8d. per lb. for quillings, and at 3½d. for chips. Wild *Cassia-buds* were bought in at 25s. per cwt. *Mace* brought 1s. 4d. to 1s. 5d. per lb. for middling pale red. *Nutmegs* sold steadily at 1s. 2½d. for 80's. *Pepper* easier; Singapore black was bought in at

6½d. per lb., but privately 6d. is being accepted on the spot, and business has been done for April-June shipment at 6¾d. Fine Singapore white was bought in at 10½d. to 10¾d. per lb., fair being quoted 8¾d. Penang white is worth 8½d. per lb.

TRAGACANTH.—Moderate sales of Bagdad firsts have been made at 16l. 10s., and this grade is now in small supply. Persian has also been in fair demand at from 9l. to 9l. 10s.

London Drug-auctions.

THE first-hand drug-sales held to-day were of moderate extent, and a fair proportion of the offerings was disposed of. Fine elemi brought high rates, cardamoms were unchanged, and buchu-leaves were easier. Cascarella was about 10s. cheaper. Rio ipecac. was unchanged, but Cartagena was easier. Jamaica wax was 5s. dearer. Sumatra benzoin sold well at firmer rates, and for fine ambergris there was keen competition. Owing to the Easter holidays the next drug-sales will be held on April 25, the date originally fixed by the drug-brokers at the beginning of the year. The following table shows the quantity of goods offered and sold publicly, the * denoting private sales:—

Offered		Sold		Offered		Sold	
Ajowan-seed.....	54 ...	0		Menthol.....	8 ...	2*	
Albumen	15 ...	0		Munjeet.....	21 ...	0	
Aloes—				Musk (grain)	3 ...	0	
Cape	50 ...	50		Myrrh	14 ...	0	
Curacao	12 ...	0		Nux vomica.....	456 ...	456	
Socotrine	20 ...	10		Oil camphor.....	50 ...	0	
Ambergris.....	8 ...	3		cajuput	1 ...	0	
Anatto-seed	28 ...	0		cassia.....	5 ...	0	
Asafetida	4 ...	0		eucalyptus	26 ...	0	
Balsam copaiba ...	11 ...	0		lime	3 ...	1	
Benzoin—				orange	1 ...	1	
Siam	16 ...	0		peppermint.....	15 ...	0	
Sumatra	126 ...	61		rose	9 ...	2	
Buchu	19 ...	19		Orange-peel	30 ...	3	
Calumba	50 ...	50		Otto of rose	1 ...	1	
Camphor (refined) ..	15 ...	0		Puree.....	1 ...	0	
Cardamoms	88 ...	56		Rhubarb	57 ...	10	
Cascarella	23 ...	23		Saffron	1 ...	0	
Chillies	20 ...	0		Sandalwood	61 ...	0	
Chiretta.....	30 ...	0		Sarsaparilla, Lima ..	16 ...	16	
Cinchona	16 ...	16		Native Jam.	17 ...	17	
Civet	11 ...	0		Senna—			
Coca-leaves	61 ...	0		Tinnevely	172 ...	160	
Croton seed	4 ...	0		Tamarinds (W. I.) ..	160 ...	115	
Elemi.....	12 ...	12		Tonka-beans.....	14 ...	0	
Ergot.....	2 ...	0		Tragacanth.....	4 ...	4	
Gum acacia	69 ...	11		Vanilla	5 ...	5	
Honey (Australian) ..	117 ...	0		Vermilion.....	10 ...	0	
Jamaica	103 ...	103		Wax bees' —			
Insect flowers	3 ...	0		East Indian	35 ...	0	
Ipecacuanha—				Jamaica	24 ...	20	
(Cartagena).....	26 ...	2*		Madagascar	32 ...	32	
(Rio)	30 ...	10		Spanish.....	20 ...	0	
Kino	7 ...	0		Zanzibar	14 ...	14	
Kola	11 ...	2		Wax, Australian ...	5 ...	1	
Lime-juice	3 ...	0		(Japan)	1 ...	1	

ALOES.—Cape aloes was full up. Fifty cases offered, of which 40 sold, at from 22s. 6d. to 24s. 6d. for fair to good seconds, slightly drossy, and 18s. 6d. to 21s. for dull and very drossy ditto. Good bright hard was held for 26s., the broker being willing to sell at 25s. 6d., subject. For 12 boxes capey and drossy Curacao no bid was made. Of 20 kegs Socotrine offered, 10 sold, at 72s. 6d. for softish.

AMBERGRIS.—Fine quality was well competed for, a tin of good grey lump selling at 95s. per oz. For inferior 39s. and 17s. per oz. was paid.

BALSAM COPAIBA.—Bright thick Maracaibo (guaranteed B.P.) was limited at 2s. Privately thick Bahia is quoted 1s. 2½d. per lb., Angostura 1s. 2½d., and Maracaibo 1s. 5d. to 1s. 5½d., c.i.f.

BENZOIN.—Rather dearer. A parcel of 46 cases Sumatra gum was put up "without reserve" and sold with good competition at from 6l. 7s. 6d. to 6l. 15s. for ordinary to fair seconds with small almonds. This sale marked an advance of 2s. 6d. to 5s. above valuations. Five cases of good fair seconds sold at 8l. 10s., and for 10 cases fair 6l. 10s. to 6l. 12s. 6d. was paid. Sixteen cases of Siam gum consisting of good seconds yellow almonds mixed with pea and bean size, of good flavour, were bought in at 17l. 10s. per cwt.

BUCHU sold at slightly easier rates for export, 1s. 1d. to 1s. 2d. being paid for fair to good green round. The s.s. *Braemar Castle* from Cape Town has brought 18 bales. Privately the drug is scarce.

CALUMBA—Fifty bags of good bright natural sorts sold at 19s. 6d. to 20s. 6d. per cwt.

CAMPHOR—In auction 10 cases of Japanese refined (Sumitomo) in 1-oz. tablets were held for 2s. 6d., and 3 cases of $\frac{1}{2}$ -oz. tablets at 2s. 7d. Two casks of German refined in bells were limited at 2s. 1 $\frac{1}{2}$ d. per lb. Privately a large business is reported to have been done in Formosa for London and the Continent at the monopoly prices of 178s. 6d. per cwt., c.i.f., for crude, and 195s., c.i.f., for pressed. To-day, German refiners advanced prices $\frac{1}{4}$ d. per lb., and now quote bells 2s. 1 $\frac{1}{2}$ d. per lb. in ton lots for prompt shipment, and 2s. 2d. for small wholesale quantities.

CARDAMOMS were in small supply, and prices were practically unchanged. Ceylon-Mysore, fine bold pale, 3s. 6d. to 3s. 8d.; medium to bold ditto, 3s. 2d. to 3s. 3d.; small and medium, 2s. 6d. to 2s. 7d.; pale long, 2s. 4d.; medium brown, 2s. 2d.; small pale, 2s.; ditto brownish, 1s. 8d.; brown splits and pickings, 1s. 4d. to 1s. 5d. Ceylon-Malabar, small, 1s. 7d., subject. Seeds, 2s. 1d. to 2s. 3d. per lb.

CASCARILLA.—Lower. Eleven bales of medium to bold silvery quill sold at 55s. to 57s. 6d., and thin twiggy at 35s. per cwt.

ELEML.—Dearer. Fine white gum sold with good competition at 5l. 2s. 6d. to 6l. per cwt.

ERGOT—Two bags of apparently baked Spanish were taken out without mention of price. Privately we hear of no business, and the tendency is easier; new Russian is quoted 2s., c.i.f., and Spanish ditto 2s. 3d.

HONEY.—Jamaica was in good demand, and full-up to dearer rates were paid; fine golden syrup selling at 28s. to 29s. 6d., firm white at 22s. to 26s. 6d., brownish ditto 21s. to 21s. 6d., pale amber syrupy to darkish red 25s. 6d. to 26s., and inferior dark ditto 20s. 6d. to 21s. 6d.

IPECACUANHA firmly held, but slow of sale. Of 30 bales Rio offered, 10 sold at from 12s. to 12s. 2d. per lb. for fair, and 11s. 2d. to 11s. 4d. for sea-damaged; good bold root was held at 12s. 6d. Although no Cartagena changed hands the market was distinctly easier, one holder of 10 bags being anxious to do business at 7s. 3d., but no bids were made beyond 6s. 9d. Another broker who offered 14 bags, bought them in at nominal prices.

KOLA.—Two barrels of West Indian natural sold at 3 $\frac{1}{2}$ d. per lb.

MENTHOL.—Eight cases of Kobayashi crystals offered, of which 2 had been sold privately, the remainder were limited at 13s. 9d. Privately there are sellers of Kobayashi at 13s. 6d. to 13s. 9d. per lb., spot, for case lots.

MYRRH.—A parcel of good natural sorts offered, but no bid was made, 80s. being wanted.

NUX VOMICA.—A parcel of ordinary dullish Calcutta seed offered and sold cheaply "without reserve" at 6s. 3d. to 6s. 9d. per cwt.

OIL, EUCALYPTUS.—Seventeen cases of oil containing 60 per cent. cineol, according to the printed analysis, were held for 1s. 8d. per lb.

OIL, LIME.—West Indian distilled sold at 1s. 8d. to 2s. per lb.

OIL, ROSE (E.I.).—Two bottles settlings realised 2 $\frac{1}{2}$ d. per oz.

ORANGE-PEEL.—A few cases of thin bright strip, from Marseilles, sold at 6 $\frac{1}{2}$ d. to 7d. per lb.

OTTO OF ROSE.—One vase of Persian sold at 9s. per oz.

RHUBARB.—Quiet. Canton, good bold round, part rough, three-quarters pinky fracture, one-quarter grey and dark, sold at 11d. per lb., subject; medium ditto at 10 $\frac{1}{2}$ d. to 10 $\frac{3}{4}$ d.; and small round, very rough, part trimming, root, 1s. Bold flat Canton, part rough, very good coat and fracture, 11 $\frac{1}{2}$ d., subject. A string of 24 cases good small to medium high-dried, three-quarters pinky, one-quarter grey and dark fracture, was bought in at 10d. per lb., nominally.

SARSAPARILLA.—Steady. Sixteen bales of Lima-Jamaica offered and sold at from 9 $\frac{1}{2}$ d. to 11 $\frac{1}{2}$ d. per lb. for country and sea-damaged, and 17 bales of native Jamaica sold at 7d. to 8d. for grey, and from 9 $\frac{1}{2}$ d. to 10 $\frac{1}{2}$ d. per lb. for red. No grey Jamaica was catalogued.

SENNA.—The bulk of the offerings of Tinnevely senna was again common, but practically everything sold at unchanged rates. Four bales of medium to bold greenish leaf sold at from 3 $\frac{1}{2}$ d. to 4 $\frac{1}{2}$ d.; and fourteen bales small to medium ditto at 2 $\frac{1}{2}$ d. to 3 $\frac{1}{2}$ d. per lb. The next grade, which comprised common and ordinary specky leaf, sold at 1d. to 1 $\frac{1}{2}$ d. down to $\frac{1}{4}$ d. Alexandria siftings have been sold privately at 3 $\frac{1}{2}$ d. per lb.

TAMARINDS.—The new crop of West Indian was in plentiful supply, and met with a good demand, Antigua selling at from 12s. to 14s. per cwt. In the spice-auctions 40 barrels Antigua offered, of which 30 sold at 13s. per cwt.

WAX, BEES.—Jamaica was about 5s. per cwt, dearer, fine bright even red selling at 9l., and pale yellow to red and brown, 8l. 10s. to 8l. 15s. A case of good grey Australian sold at 7l. 12s. 6d. per cwt.; 32 mats Madagascar offered and sold at 7l. 2s. 6d. for fair brown, and 7l. for wormy ditto; Zanzibar was also in small supply, fair brown block selling at 6l. 10s. to 6l. 15s., and wormy and mixed, 6l. 5s.

Coming Events.

Monday, April 1.

Society of Chemical Industry, Burlington House, Piccadilly, W., at 8 p.m. "The Effect on the Marsh Test of some Commercial Products containing Selenium and Tellurium," by Mr. A. E. Berry; "A New System for the Manufacture of Borax and Nitrates," by Dr. W. Newton; "Basic Superphosphate: its preparation and use as a Manure," by Mr. John Hughes; "The Preparation of Pure Cineol from Eucalyptus Oil by means of the Arsenate," by Mr. Watson Smith; "Action of Caustic Potash and Soda on Stannous Sulphide," by Dr. F. Mollwo Perkin.

Tuesday, April 2.

Royal Photographic Society, 66 Russell Square, W.C., at 8 p.m. Lantern-lecture by Mr. C. Reid on "Animals and Birds in their Native Haunts."

Aberdeen Pharmaceutical Association, Kennaway's Rooms, Union Street, Aberdeen. Annual dinner.

Wednesday, April 3.

Forfarshire and District Chemists' Association, Mather's Hotel Dundee, at 4 p.m. To consider the Pharmacy Bill and the Procurator Fiscal's letter.

Pharmaceutical Society of Great Britain, 16 Bloomsbury Square, W.C., at 11 a.m. Council meeting.

Society of Chemical Industry (Manchester Section), Victoria Hotel, at 7. "Notes on Glucose and other Brewery-products," by Mr. T. A. Reid, F.C.S.; "Notes on Indigo," by Dr. Herbert Levinstein.

THE NOTTINGHAM CHEMISTS are next month to discuss the new Pharmacy Bill. Invitations are being issued to all the registered chemists in Nottingham and district, in Derbyshire, and Leicestershire.

POPULAR SCIENCE.—The following lectures will be given at the Royal Victoria Hall, Waterloo Road, S.E., on Tuesday evenings, at 8.30, during April:—April 2, Mr. A. W. Porter, on "Waves and Oscillations"; April 9, Mr. R. Kearton, F.R.S., on "Wild Nature at Home"; April 16, Captain Wiggins, F.R.G.S., on "Arctic Discovery—12,000 miles in Dog and Reindeer Sledges across Siberia"; April 23, Mr. J. S. Dymond, "Our Field crops as a Factory of Food"; April 30, Mr. H. M. Birdwood, C.S.I., "Facts about India, with some Account of the Plague and the Famine."

WILSON'S FOOD AGAIN.—In the City of London Court on Wednesday, before Mr. Registrar Wild, the case of *Greenberg v. Newman* came on for hearing. It was a claim for 2l. 1s. 6d., being the price of Wilson's patent food supplied. The plaintiffs abandoned part of their claim, and sued for the balance, amounting to 1l. 0s. 9d. The defendant, in the course of his evidence, stated that he had only sold two or three tins of the food. After the sale of the first tin a complaint was made, and another customer had brought back a tin of the food and said it was only fit for pigs' food. Judgment was entered for the defendant on a question of delivery, with costs.